9.7.d

NATURAL HISTORY,

GENERAL AND PARTICULAR,

BY THE

COUNT DE BUFFON.

TRANSLATED INTO ENGLISH,

ILLUSTRATED

WITH ABOVE THREE HUNDRED COPPER-PLATES,

AND OCCASIONAL

NOTES AND OBSERVATIONS,

By WILLIAM SMELLIE,

MEMBER OF THE ANTIQUARIAN AND ROYAL SOCIETIES OF EDINBURGH.

THE THIRD EDITION,

IN NINE VOLUMES.

VOL. VIII.

LONDON:

PRINTED FOR A. STRAHAN, AND T. CADELL IN THE STRAND.

M DCC XCI.

MVSEVM
BRITAN
NICVM

CONTENTS.

	Page.
DISSERTATION on Mules - -	1
The Nomenclature of Apes - -	39
Natural History of the Orang Outangs, or the Pongo and Jocko - - -	77
——— *of the Pigmy* -	106
——— *of the Gibbon, or long-armed Ape* - -	113
——— *of the Magot, or Barbary Ape*	117
——— *of the Baboon properly so called*	121
——— *of the Great Baboon* -	125
——— *of the Mandrill, or ribbed nose Baboon* - - -	129
——— *of the Ouanderou and the Lowando* - -	132
——— *of the Maimon, or pig-tailed Baboon* - - -	137
——— *of the Macaque, or hair-lipped Monkey, and the Egret* -	140
——— *of the Patas, or Red Monkey*	144
——— *of the Malbrouck and Chinese-Bonnet* - - -	148
——— *of the Mangabey* - -	154
——— *of the Mona, or varied Monkey*	156
——— *of the Callitrix, or Green Monkey*	160
——— *of the Muſtache* - -	163
——— *of the Talapoin* - -	165
——— *of the Douc, or Cochin-China Monkey* - - -	168

Page.

Natural Hiſtory of the Sapajous and Sagoins 172
——— *of the Ouarine and Alouate* 176
——— *of the Coaita and Exquima* 184
——— *of the Sajou, or Capuchin Monkey* - - - 193
——— *of the Sai, or Weeper* - 196
——— *of the Saimiri, or Orange Monkey* - - - 199
——— *of the Saki, or Fox-tailed Monkey* - - - 201
——— *of the Tamarin, or great-eared Monkey* - - 203
——— *of the Ouiſtiti, or ſtriated Monkey* - - 205
——— *of the Marikina, or ſilky Monkey* - - - 209
——— *of the Pinche, or red-tailed Monkey* - - - 211
——— *of the Mico, or fair Monkey* 214
——— *of the White, or Polar Bear* 216
——— *of the Cow of Tartary* - - 225
——— *of the Baikal Hare* - 228
——— *of the Ziſel* - - 229
——— *of the Zemni* - - 232
——— *of the Pouc* - - 233
——— *of the Perouaſca* - - 234
——— *of the Souſlik* - - *ib.*
——— *of the gilded Mole* - 238
——— *of the white Water Rat* - *ib.*
——— *of the Guiney Hog* - - 239
——— *of the Cape de Verd Boar* - 241
——— *of the Mexican Wolf* - - 258
——— *of the Alco* - - - 261

Natural

Page.

Natural Hiſtory of the Tayra, or Guiney Weaſel 265
——— *of the Merian Opoſſum* - 267
——— *of the Akouci* - - 269
——— *of the Tucan, or Mexican Shrew* - - 271
——— *of the Braſilian Shrew* - 273
——— *of the Rock Cavy* - - 274
——— *of the Tapeti, or Braſilian Hare* 276
——— *of the Crab Eater* - - 279
——— *of an Anonymous Animal* - 283
——— *of the Madagaſcar Rat* - 284
Syſtematic Index - - - - 287

DIRECTIONS to the BINDER.

Place Plate CCLVIII. between page 104 and page 105.
CCLIX. CCLX. between page 116 and page 117.
CCLXI. CCLXII. between page 120 and page 121.
CCLXIII. CCLXIV. between page 124 and page 125.
CCLXV. CCLXVI. between page 128 and page 129.
CCLXVII. between page 132 and page 133.
CCLXVIII. between page 136 and page 137.
CCLXIX. between page 138 and page 139.
CCLXX. CCLXXI. between page 142 and page 143.
CCLXXII. CCLXXIII. between page 146 and page 147.
CCLXXIV. CCLXXV. between page 152 and page 153.
CCLXXVI. CCLXXVII. between page 154 and page 155.
CCLXXVIII. between page 158 and page 159.
CCLXXIX. between page 162 and page 163.
CCLXXX. between page 164 and page 165.
CCLXXXI. between page 166 and page 167.
CCLXXXII. between page 170 and page 171.
CCLXXXIII. between page 192 and page 193.
CCLXXXIV. CCLXXXV. between page 194 and page 195.
CCLXXXVI. CCLXXXVII. between page 198 and page 199.
CCLXXXVIII. between page 200 and page 201.
CCLXXXIX. between page 202 and page 203.
CCXC. between page 204 and page 205.
CCXCI. between page 208 and page 209.
CCXCII. between page 210 and page 211.
CCXCIII. between page 212 and page 213.
CCXCIV. between page 216 and page 217.
CCXCV. between page 224 and page 225.
CCXCVI. between page 236 and page 237.
CCXCVII. between page 256 and page 257.
CCXCVIII. between page 270 and page 271.
CCXCIX. CCC. between page 282 and page 283.
CCCI. between page 284 and page 285.

NATURAL HISTORY.

OF MULES.

[*From the ſupplementary Volume.*]

WE ſhall retain the name of *mule* to the animal produced by the jack-aſs and mare; and to that procreated between the horſe and ſhe-aſs, we ſhall give the denomination of *bardeau*. The differences which ſubſiſt between theſe two mongrel animals have never hitherto been marked by any author. Theſe differences, however, afford the moſt certain criterion for diſtinguiſhing the relative influence of males and females in the product of generation. A compariſon of theſe two mules, and other mongrels proceeding from a mixture of different ſpecies, will give us more preciſe ideas concerning this relative influence, than could be obtained by ſimply comparing two individuals of the ſame ſpecies.

The bardeau is much ſmaller than the mule, and ſeems to preſerve the dimenſions of its mother, the ſhe-aſs; and the mule retains the dimenſions of the mare. Hence, in mixed ſpecies, the ſize of the body appears to depend more upon the mother than the father. Now, theſe two animals differ in figure. The neck of the bardeau is thinner, the back ſharper, and the crupper more pointed; while the fore-head of the mule is better ſhaped, the neck more beautiful, the ſides rounder, and the crupper more plump. Hence both of theſe animals retain more of the mother than of the father, not only in magnitude, but in figure of body. This remark, however, does not apply to the head, limbs, and tail. The head of the bardeau is longer, and not ſo thick in proportion as that of the aſs; and the head of the mule is ſhorter and thicker than that of the horſe. Hence, in the figure and dimenſions of the head, they have a greater reſemblance to the father than to the mother. The tail of the bardeau is garniſhed with hair nearly in the ſame manner as that of the horſe; and the tail of the mule is almoſt naked, like that of the aſs. In this extreme part of the body, therefore, the ſimilarity to the father predominates. The ears of the mule are longer than thoſe of the horſe; and the ears of the bardeau are ſhorter than thoſe of the aſs. The limbs of the mule are hard and limber, like thoſe of the horſe; and the limbs of the bardeau are more

more fleſhy. Hence theſe two animals, in the form of the head, limbs, and other extremities of the body, have a greater reſemblance to the father than to the mother.

In the years 1751 and 1752, I made two he-goats copulate with ſeveral ewes, and I obtained nine mules, ſeven males and two females. Struck with this difference between the number of males and females, I endeavoured to diſcover whether the number of male mules, produced by the aſs and mare, predominated in the ſame proportion. The information I received did not aſcertain this point; but I learned that the number of male mules always exceeded that of the females. The Marquis de Spontin-Beaufort made a dog intermix with a ſhe-wolf, and procured four mules, three of which were males *. In fine, having made inquiries concerning mules which were more eaſily obtained, I learned, that the number of males greatly exceeded that of the females. In the article, *Canary-birds* †, I remarked, that of nine young produced between a goldfinch and a Canary-bird, there were only three females. Theſe are the only certain facts I could collect on this ſubject ‡, which merits more

* Letter from the Marquis de Spontin-Beaufort to M. de Buffon, dated Namur, July 14, 1773, and atteſted by two letters from M. Surirey de Boiſſy, dated Namur, June 9, and July 19, 1773.

† See tom. iv. de l'Hiſt. Nat. des Oiſeaux.

‡ What is related by different authors, concerning the ju-

more attention than it has yet received; for the myſteries of generation by the concourſe of different ſpecies, and the aſcertaining of the proportional effective powers of males and females in every kind of reproduction, can alone be developed by an aſſemblage of ſimilar facts.

Of my nine mules produced by the he-goat and the ewes, the firſt was brought forth on the 15th day of April. When examined three days

mars, appears to be very ſuſpicious. The Sieur Léger, in his Hiſtory of the Voudois, tells us, 'That, in the valleys of 'Piedmont, there are mongrel animals, called *jumars*; that, 'when engendered by a bull and a mare, they are denominated *baf* or *buf*, and, when produced by a bull and ſhe-aſs, 'they receive the appellation of *bif*; that theſe jumars have 'no horns, and are of the ſize of mules; that they are very 'ſwift; that he mounted one of them on the 30th day of September, and performed, in a ſingle day, a journey of eighteen 'leagues, or fifty-four Italian miles; and that they were ſurer 'and more eaſy than a horſe.'

From an aſſertion of this kind, we would be led to believe, that theſe jumars, produced by the bull and the mare and ſhe-aſs, either exiſt, or did formerly exiſt; yet I have never been able to diſcover any confirmation of theſe facts.

Dr Shaw, in his Hiſtory of Algiers, p. 166. ſays, 'To the 'mule we may join the *kumrah*, as the Algerines call a little 'ſerviceable beaſt of burden, begot betwixt an aſs and a cow. 'That which I ſaw at Algiers (where it was not looked upon 'as a rarity), was ſingle hoofed, like the aſs, but diſtinguiſhed from it, as having a ſleeker ſkin, with the tail and the 'head (though without horns) in faſhion of the dam's.' Dr. Shaw is an author who deſerves credit. However, having conſulted ſeveral perſons who had been in Barbary, and particularly the Chevalier James Bruce, they all aſſured me, that they had no knowledge concerning theſe animals engendered by an aſs and a cow.

after

after birth, and compared with lambs of the ſame age, it differed from them in the following particulars: The ears, upper part of the head, as well as the diſtance between the eyes, were larger. It had beſides a band of whitiſh gray hair from the nap of the neck to the extremity of the tail. The four legs, the ſuperior part of the neck, the breaſt, and belly, were covered with the ſame white, coarſe hair. There was a ſmall quantity of wool upon the flanks only; and even this ſhort, curled wool, was mixed with a great deal of hair. The legs of this mule were alſo an inch and a half longer than thoſe of a lamb of the ſame age. When examined eighteen days after birth, the white hairs were partly fallen off, and replaced by brown hairs, ſimilar in colour to thoſe in the he-goat, and nearly as coarſe. The limbs continued to be more than an inch and a half longer than thoſe of the lamb; and, on account of this length of limbs, it did not walk ſo well as the lamb. This lamb was killed by an accident; and I took no farther notice of the mule till four months afterward, when I compared it with a ſheep of the ſame age. In the mule, from the ſpace between the eyes to the extremity of the muzzle, the diſtance was at leaſt an inch ſhorter than in the ſheep; and the head of the mule was more than half an inch broader, at the broadeſt part. Hence the head of this mule was thicker and ſhorter than that of a ſheep of equal age. The curva-

ture of the upper jaw, taken from the corner of the mouth, was near half an inch longer in the mule than in the ſheep. The head of the mule was not covered with wool, but with long, buſhy hair. The tail was two inches ſhorter than that of the ſheep.

In the beginning of the year 1752, I obtained, from the union of a he-goat with ewes, eight other mules, ſix of which were males, and two females. Two of them died before I could examine them; but they ſeemed to reſemble thoſe who ſurvived. Two of them, a male and a female, had four teats, two on each ſide, like thoſe of the goats. In general, theſe mules had long hair on the belly, and particularly about the penis, as in the he-goat, and alſo on the feet, and particularly thoſe behind. Moſt of them had the chanfrin leſs arched than is common to lambs, the diſtance between the hoofs larger, and the tail ſhorter.

Under the article *Dog*, I related ſome experiments made with a view to procure an intermixture between a dog and a wolf, where all the precautions employed for that purpoſe were abortive *. The concluſion drawn from theſe experiments was in the following words: 'I pre-'tend not abſolutely to affirm, that the wolf, 'in no age or country, never intermixed with 'dogs. The contrary is aſſerted poſitively by 'the ancients. Ariſtotle remarks, that, though

* See vol. IV. p. 24.

'animals

'animals of different ſpecies ſeldom intermix, 'yet it certainly happens among dogs, foxes, 'and wolves.' I have ſince learned the propriety of being thus cautious in my concluſions; for M. le Marquis de Spontin-Beaufort has ſucceeded in the junction of a dog and a wolf. I was informed of this fact by M. Surirey de Boiſſy, in a letter which he wrote me in the following terms:

'*Namur*, *June* 9, 1773. The Marquis de 'Spontin has in this place reared a very young 'ſhe-wolf, to whom he gave, as a companion, a 'dog of nearly the ſame age. They were left 'at full liberty, and came into the apartments, 'the kitchen, the ſtable, &c. They live in the 'moſt intimate friendſhip, and are extremely 'careſſing, lying under the table, and upon the 'feet of the perſons who ſit around.

'The dog is a kind of mongrel maſtiff, and 'full of vigour. During the firſt ſix months, 'the wolf was fed with milk, and afterward 'with raw fleſh, which it preferred to what was 'roaſted. When ſhe eat, no perſon durſt approach her. At other times, ſhe permitted 'every freedom, except abuſe. She careſſed all 'the dogs which came near her, till ſhe began 'to give a preference to her old companion; after which, ſhe was enraged at every other. She 'was covered, for the firſt time, on the 25th 'day of March laſt. Her amours continued 'fifteen days, with pretty frequent repetitions;

'and ſhe brought forth her young on the ſixth 'day of June at eight o'clock in the morning. 'Hence the time of her geſtation was ſeventy-'three days. The young were four in number, 'and of a blackiſh colour. Some of them have 'the half of the breaſt, and the pats, white. 'Theſe colours are derived from the dog, which 'is black and white. From the moment of lit-'tering, ſhe growled and attacked all who ap-'proached her. She no longer diſtinguiſhed her 'maſters; and would even have devoured the 'dog, if he had come near her.

'I add, that ſhe has been chained ever ſince 'ſhe made a break at her gallant, who had leap-'ed a neighbouring wall, in order to come at a 'bitch in ſeaſon; that ſhe nearly worried her 'rival; and that the coachman ſeparated them 'by repeated blows of a large bludgeon, and 'conducted her to her lodge, where, imprudent-'ly commencing his chaſtiſement, her fury roſe 'to ſuch a degree, that ſhe bit him twice in the 'thigh, and the wounds confined him ſix weeks 'to his bed.'

In my anſwer to this letter, I thanked M. de Boiſſy, and added ſome remarks with a view to remove my doubts. M. le Marquis de Spontin having ſeen my anſwer, obligingly wrote me in the following terms:

'*Namur*, *July* 14, 1773. I read with much 'ſatisfaction the judicious remarks you tranſ-'mitted to M. Surirey de Boiſſy, whom I had

'begged

'begged to communicate to you, during my 'abſence, a fact, which cannot be denied, not-'withſtanding the force of your arguments, and 'the opinion I have always entertained, as well 'as the reſt of the world, of the excellence of 'the many learned productions by which you 'have enlightened the republic of letters. But, 'whether it was an effect of chance, or one 'of thoſe ſports of Nature, who, as you re-'mark, ſometimes departs from her eſtabliſhed 'laws, the fact is inconteſtible; and you will 'be convinced of its truth, if you give credit 'to what I have the honour of writing you, 'which can be atteſted by two hundred perſons 'at leaſt, who were witneſſes to it as well as 'myſelf. This ſhe-wolf was only three days 'old when I purchaſed it from a peaſant, who 'had carried it off, after killing the mother. I 'fed it with milk till it was able to eat fleſh. 'I recommended to thoſe who had the care of 'it, to careſs, and handle it often, with a view 'to render it as tame as poſſible. At laſt, it be-'came ſo familiar that I have taken it to hunt 'in the woods at the diſtance of a league from 'my houſe, without any danger of loſing it. 'Sometimes, when I was unable to call it back, 'it returned of its own accord in the night. I 'was always more certain of keeping it at home 'when I had a dog; for it was fond of dogs; 'and thoſe who had overcome their natural re-'pugnance, ſported with it, as if they had been

'animals

'animals of the ſame ſpecies. During all this 'time, it attacked only cats and poultry, whom 'it ſtrangled, without diſcovering any inclina-'tion to eat them. As ſoon as ſhe attained the 'age of twelve months, her ferocity increaſed, 'and I began to perceive that ſhe had a ſtrong 'deſire to attack ſheep and bitches. I then 'chained her; becauſe ſhe frequently ſprung 'upon her maſter, when he attempted to reſtrain 'her. She was at leaſt one year old when I in-'troduced her to the acquaintance of the dog 'which covered her. She has been kept in my 'garden, which is ſituated in the centre of the 'town, ſince the end of November laſt; and, 'therefore, no male wolf can be ſuppoſed to have 'had any communication with her. As ſoon 'as ſhe came in ſeaſon, ſhe diſcovered ſuch an 'affection for the dog, and the dog for her, 'that each of them howled frightfully when 'they were not together. She was firſt covered 'on the 28th day of March, and twice each 'day during the two following weeks. They 'continued attached to each other more than a 'quarter of an hour at every embrace, during 'which time the wolf complained, and ſeemed to 'ſuffer pain; but the dog was perfectly at his 'eaſe. Three weeks after, her pregnancy was 'perceptible. On the ſixth day of June, ſhe 'brought forth four young, whom ſhe ſtill 'ſuckles, though they are five weeks old, and 'have pretty long ſharp teeth. They have a

'perfect

BL

'perfect reſemblance to puppies, having long 'pendulous ears. One of them is black, with 'a white breaſt, which was the colour of the 'dog. The others will probably be of the colour 'of the mother. The hair of each of them is 'coarſer than that of ordinary dogs. There is but 'one female, with a very ſhort tail, like the dog, 'who had ſcarcely any tail. They promiſe to 'be large, ſtrong, and very ferocious. The mo-'ther is extremely ſolicitous concerning their 'welfare. I doubt whether I ſhall keep her any 'longer, having been chagrined by an accident 'that befell my coachman, whom ſhe bit ſo 'cruelly, that he has been confined to his bed 'theſe ſix weeks paſt. But I will engage, that, 'if preſerved, ſhe will again have puppies by 'the ſame dog, who is white, with large black 'ſpots on the back. I hope, Sir, that what I 'have ſaid will anſwer for a reply to your re-'marks, and that you will no longer heſitate 'concerning the truth of this ſingular event.'

My doubts are entirely removed, and I am happy to embrace this opportunity of expreſſing my thanks. The eſtabliſhment of a rare fact in natural hiſtory is a great acquiſition. The means of obtaining ſuch facts are always difficult, and often, as we have ſeen, very dangerous. It was for this laſt reaſon that I ſequeſtered my wolf and dog from all ſociety. I had formerly rear-ed a young wolf, who, till the age of twelve months, did no miſchief, and followed his maſter

maſter like a dog. But, in the ſecond year, he committed ſo many exceſſes that it was neceſſary to kill him. I learned by experience, that theſe animals, though ſoftened by education, reſume, with age, their natural ferocity. Willing to prevent theſe inconveniences, I kept my ſhe-wolf always confined along with the dog; and I acknowledge that this method of procuring an union between them was ill imagined; for, in this ſtate of ſlavery and diſguſt, the diſpoſitions of the wolf, inſtead of being ſoftened, were ſoured to ſuch a degree, that ſhe was more ferocious than if ſhe had been at full liberty; and the dog, having been early detached from his equals, and from the ſociety of men, had aſſumed a ſavage and cruel character, which the bad humour of the wolf ſerved only to augment; ſo that, during the two laſt years, their antipathy aroſe to ſuch a degree, that they deſired nothing ſo much as to devour each other. In the experiment made by the Marquis de Spontin, every circumſtance was reverſed. The dog was in his ordinary condition: He had all the mildneſs and other qualities which this docile animal acquires by his intercourſe with man. The wolf was likewiſe reared in perfect freedom and familiarity along with the dog, which, by being under no reſtraint, had loſt his repugnance to her; and ſhe, by the ſame mild management, became ſuſceptible of attachment to him. She, therefore, received him with cordiality, whenever

ever the hour of Nature ſtruck: And, though ſhe ſeemed to complain and to ſuffer, ſhe felt more pleaſure than pain; for ſhe allowed the operation to be repeated every day, during all the time ſhe was in ſeaſon. Beſides, the proper moment for this unnatural union was ſeized. The wolf felt the impreſſion of love for the firſt time. She was only in the ſecond year of her age; and, of courſe, had not entirely reſumed her natural ferocity.

All theſe circumſtances, and perhaps ſome others which were not obſerved, contributed to the ſucceſs of this fertile embrace. From what has been remarked, it would appear, that the moſt certain method of rendering animals unfaithful to their ſpecies, is to place them, like man, in ſociety, and to accuſtom them gradually to individuals which, without ſuch precautions, would not only be indifferent, but hoſtile to each other. However this matter ſtands, the Marquis de Spontin has aſcertained the fact, that the dog can produce with the wolf even in our climates. I could have wiſhed that the ſucceſs of this experiment had induced its author to try the union of a wolf with a bitch, and of foxes with dogs. But if this deſire ſhould be conſidered as exorbitant, he muſt aſcribe it to the inſatiable enthuſiaſm of a naturaliſt *.

But

* A ſimilar fact has been announced by M. Bourgelat, in a letter to me, dated April 15, 1775: 'My Lord Pembroke,' ſays

But to return to our mules. In thoſe I obtained from the he-goat and ewe, the number of males was as ſeven to two; in thoſe from the dog and ſhe-wolf, the males were as three to one; and, in thoſe from the goldfinch and Canary bird, the males were as ſixteen to three. It appears, therefore, to be certain, that the number of males, which is always greater than that of females in pure ſpecies, is ſtill greater in mixed ſpecies. Hence, the male, in general, has a greater influence on the produce of generation than the female, becauſe he tranſmits his ſex to the greateſt number, and becauſe the number of males augments in proportion to the remoteneſs of the ſpecies which intermix. The ſame thing muſt happen in the conjunction of different races: By croſſing the remoteſt of theſe, we ſhall not only procure the moſt beautiful productions, but the greateſt number of males.

ſays he, 'informed me, that, within theſe few days, he ſaw 'a large maſtiff copulate with a ſhe-wolf; that the wolf is 'tame; that ſhe is always in her maſter's chamber, and con-'ſequently under his eye; that ſhe never goes out alone; 'and that ſhe follows her maſter with all the fidelity of a 'dog. He adds, that an animal merchant has had, at four 'different times, mules produced by the wolf and dog. He 'alleges, that the wolf is only a wild dog; and in this opi-'nion he is joined by the celebrated anatomiſt Mr. Hunter. 'He thinks differently with regard to the fox. He tells me, 'that a bitch, who was a daughter of a wolf, and belonged to 'Lord Clanbrazil, intermixed with a ſetting dog, and pro-'duced puppies, which, according to his hunter, will be excel-'lent pointers.'

I have

I have often endeavoured to inveſtigate the reaſon why any religion, or any government, ſhould prohibit the marriage of brothers and ſiſters. Did men learn, by very ancient experience, that the union of brother and ſiſter was leſs fertile than an intermixture with ſtrangers, or that the former produced fewer males, and feebler and more unhandſome children? It is certain, however, that, from a thouſand experiments, both in men and the other animals, croſſing the breed is the only mode of ennobling and preſerving the perfection of the ſpecies.

To theſe facts and experiments, let us add what the ancients have ſaid upon this ſubject. Ariſtotle tells us, that the mule engenders with the mare, and that the junction produces an animal which the Greeks called *hinnus* or *ginnus*. He likewiſe remarks, that the ſhe-mule eaſily conceives, but ſeldom brings the fœtus to perfection *. Of theſe two facts, the ſecond is more rare than the firſt; and both happen only in warm climates. M. de Bory, of the Royal Academy of Sciences, and formerly governour of the American iſlands, communicated to me a recent fact of this kind, in a letter, dated May 7, 1770, of which the following is an extract:

'You will perhaps recollect, Sir, that M. 'd'Alembert read, laſt year, in the Academy of 'Sciences, a letter, which informed him, that 'a ſhe-mule, in the iſland of St. Domingo,

* Ariſt. Hiſt. Animal. lib. vi. cap. xxiv.

'had brought forth a foal. I was deſired to 'write for proper vouchers of the fact; and I 'have now the honour of ſending you the certi-'ficate which I received..... My correſpond-'ent is worthy of the higheſt credit. He adds, 'that he has ſeen mules cover, indiſcriminately, 'ſhe-mules and mares, and likewiſe ſhe-mules 'covered by ſtallions and he-mules.'

This certificate is judicially atteſted, and ſigned by witneſſes of unqueſtionable veracity. The ſubſtance of it is, that on the 14th day of May, 1769, M. de Nort, Knight of St. Louis, and late Major of the Royal Legion of St. Domingo, had a ſhe-mule brought to him, which was ſaid to be ſick; that her belly was remarkably large, and a membrane protruded through the vagina. M. de Nort, believing the animal to be inflated, ſent for a Negro farrier, who had been accuſtomed to take care of diſeaſed animals; that this Negro, who arrived in the abſence of M. de Nort, had thrown down the mule, in order to give her a draught; that, the moment after the fall, ſhe brought forth a young mule, perfectly formed, and covered with long and very black hair; that the young mule lived an hour; but that, having been both hurt by the fall, the foal died ſoon after birth, and the mother ten hours after; and, in fine, that the young mule was ſkinned, and the ſkin ſent, ſays M. de Nort, to Doctor Matty, who depoſited it in the Muſæum of the Royal Society at London.

Other

Other eye-witneſſes, and particularly M. Cazavant, ſurgeon, add, that the young mule ſeemed to have been mature, and well formed; that, from the appearance of its hair, head, and ears, it had a greater reſemblance to the aſs than common mules; that the paps of the mother were ſwelled, and full of milk; that, when the ignorant Negro perceived the feet iſſuing from the vagina, he drew ſo forcibly as to invert the uterus, and lacerate the parts, which occaſioned the death of both mother and foal.

Theſe facts, which appear to be well aſcertained, ſhow, that, in warm climates, the mule is not only capable of conception, but of bringing the fœtus to full maturity. From my correſpondents in Spain and Italy, I learn, that ſimilar events have happened in theſe countries: But the facts are not ſo completely authenticated. It ſtill remains to be inquired, whether this St. Domingo mule was impregnated by an aſs or a mule. The ſuperior reſemblance of the young mule to the former ſeems to indicate, that ſhe had been covered by an aſs. The ferocious ardour of the aſs renders him very indifferent in the choice of females, and makes him attack, with nearly the ſame avidity, the ſhe-aſs, the mare, and the mule.

We may, therefore, conſider it as an eſtabliſhed fact, that the he-mule can generate, and the ſhe-mule produce. Like other animals, they have a ſeminal liquor, and all the organs neceſ-

ſary to generation. But mongrel animals are always leſs fertile, and more tardy than thoſe of a pure ſpecies. Beſides, mules have never produced in cold climates, ſeldom in warm regions, and ſtill more ſeldom in temperate countries *. Hence their barrenneſs, without being abſolute, may

* To the above facts, the tranſlator has to add an inſtance of the prolific powers of a ſhe-mule in the North of Scotland. Having heard that a mule, belonging to Mr. David Tullo, farmer in Auchtertyre, in the county of Forfar, had ſome years ago brought forth a foal, he tranſmitted a few queries to be put to Mr. Tullo; and requeſted that his anſwers might be legally atteſted before a magiſtrate. This requeſt was chearfully complied with; and the following is an exact copy of the queries, anſwers, and atteſtations:

Interrogatories to be put to Mr. Tullo, tenant in Auchtertyre, pariſh of Newtyle, and county of Forfar, with his Anſwers thereto:

1*mo*, Had you ever a ſhe-mule? At what period? Is it true that the mule had a foal? At what time was ſhe covered; and when did ſhe foal?

Anſwered by Mr. Tullo: That he bought a ſhe-mule about twenty years ago: That ſhe was conſtantly in ſeaſon for a horſe: That about ſome years thereafter, he gave her a horſe; and that ſhe, thereafter, gave him a foal, about the 10th of June. The mule's price was four pounds five ſhillings ſterling.

2*do*, What was the colour of the foal? Was there any thing particular in its figure?

Anſwer: The foal was exactly the colour of its mother, inclined to black, with a very large head, big ears, and ſmall tail; and the declarant thinks, had its head been weighed when foaled, it would have weighed nearly as much as its body.

3*tio*,

may be regarded as poſitive; ſince their productions are ſo rare, that a few examples only can be

3*tio*, How long was the animal allowed to live?

Anſwer: The next day after the mule foaled, it was ſent, with its mother, to the Loch of Lundie, in order to let the foal die, as the declarant could not want the mule's work, and the mother ſeemed not fond of the foal: That it was accordingly left, and next day came to Auchtertyre, about two miles diſtance, over a hill, with the cattle of Auchtertyre, that had been grazing near to that place, and was drowned in a ditch the day following.

4*to*, Was its ſkin preſerved, or the head, or any other bones of the ſkeleton? Could any part thereof be ſtill found?

Anſwered: Neither the ſkin, nor any part of the ſkeleton was preſerved, nor can now be had; though the declarant has often regretted the not preſerving the foal, as its mother always performed any work that a horſe of fifteen pounds value could do.

5*to*, Is the mother ſtill alive? What is her age?

Anſwer: The mother died, about eight years ago, of an epidemic cold that was raging among the horſes in this country: The mule had little or no milk after foaling, and the foal got ſome cow's milk: And this is all that he remembers of the matter.

DAVID TULLO.

Auchtertyre, 4*th Feb.* 1780.

We James Small, tenant in Burnmouth, and Robert Ramſay, tenant in Newtyle, hereby certify, That we have often ſeen the mule above deſcribed, and we know that ſhe had a foal, as is narrated by David Tullo.

JAMES SMALL.
ROB. RAMSAY.

Ballantyne-Houſe, 4*th Feb.* 1780.

The within interrogatories were put to David Tullo, tenant in Auchtertyre, anent the mule he had, and the foal ſhe produced,

be collected. But men were wrong in aſſerting that mules were abſolutely barren, and that all animals proceeding from a mixture of different ſpecies were, like the mules, incapable of producing. The facts formerly related concerning the produce of a he-goat and a ewe, of a dog and a ſhe-wolf, and of Canary-birds and gold-finches, demonſtrate, that theſe mongrels are by no means barren, and that ſome of them are equally prolific with their parents.

It is an unhappy circumſtance, that a ſmall, and often nominal error, extends over every object to which it has any relation, and at laſt not only becomes an error in fact, but gives riſe to a general prejudice, that is more difficult to remove than the particular opinion from which it originated. A ſingle word, a name like that of *mule*, which ought ſolely to repreſent the idea of the animal proceeding from the aſs, and mare, has been improperly applied to the animal produced by the horſe and the ſhe-aſs, and afterward, with ſtill greater impropriety, to all quadrupeds, and all birds, of mixed ſpecies: And,

duced, to which he gave the anſwers ſubjoined to each query, and ſigned them, as did James Small and Robert Ramſay, atteſting the truth thereof, in preſence of

GEORGE WATSON, J. P.

The original atteſtation is in the poſſeſſion of the Tranſlator; and he lately tranſmitted notorial or authenticated copies of it to the Count de Buffon, and to Thomas Pennant, Eſq. of Downing, in Flintſhire.

as this word *mule*, in its original acceptation, included the idea of the barrenneſs common to the animal proceeding from the aſs and mare, this idea of barrenneſs has been conveyed to all beings who have the denomination of *mules*; I ſay to all beings; for, independent of quadrupeds, birds, and fiſhes, mule plants have been fancied, to which, without heſitation, this general ſterility has alſo been aſcribed. None of theſe beings, however, is abſolutely barren. The *mule*, properly ſo called, or the animal produced by the aſs and mare, is not abſolutely barren; but its prolific powers, when compared with thoſe of pure ſpecies, or even with thoſe of other animals of a mixed ſpecies, are much more feeble and uncertain.

All mules, ſays Prejudice, are vitiated animals, incapable of producing: No animal, ſay Reaſon and Experience, though proceeding from two ſpecies, is abſolutely barren. It ought to be remarked, however, that in pure, as well as in mixed ſpecies, the degrees of fertility are very different. In the firſt, ſome, like the fiſhes and inſects, multiply, annually, by millions; others, as the birds and ſmall quadrupeds, produce by twenties and dozens; in fine, others, as man, and the larger quadrupeds, produce only one in twelve months. The number produced may be ſaid to be in the inverſe proportion of the magnitude of animals. The horſe and aſs bring forth but one in a year; and, in the ſame pe-

riod, the mouſe and Guiney-pig produce thirty or forty. Hence the fecundity of theſe ſmall animals is thirty or forty times greater; and, if a ſcale were formed of the different degrees of fertility, the ſmall animals above enumerated would occupy the higheſt points, while the horſe and aſs would be found nearly in the loweſt; for the elephant alone is leſs fertile.

In mixt ſpecies, there are alſo different degrees of fecundity; for animals proceeding from two ſpecies partake of two natures, and are, in general, leſs fertile; and this want of fertility increaſes in proportion to the fecundity of the parents. Hence, if the horſe and aſs, two animals naturally not very fertile, mix, the original infecundity, inſtead of diminiſhing in the mongrel race, muſt be augmented. The mule will not only be leſs fertile than its parents, but, perhaps, the moſt unfertile of all mongrels, becauſe all the other mules which produce, ſuch as thoſe proceeding from the he-goat and ewe, from the goldfinch and Canary-bird, &c. are much more fruitful than thoſe produced by the aſs and horſe. It is to this original and particular cauſe, that the infecundity of the mule and bardeau ſhould be referred. A ſecond cauſe, ſtill more particular, renders the laſt animal leſs prolific than the firſt. The mule proceeding from the aſs and mare retains the ardent temperament of the father, and, of courſe, poſſeſſes a high degree of prolific power; while the bardeau proceeding

ceeding from the horſe and aſs is, like its father, leſs potent, and leſs able to engender. Beſides, the mare, being leſs ardent than the ſhe-aſs, is likewiſe more fertile, ſince ſhe conceives and retains with more certainty. Thus every circumſtance concurs in rendering the mule more prolific than the bardeau; for ardour of temperament in the male, which is ſo neceſſary to ſucceſsful generation and the number produced, is hurtful in the female, and almoſt always prevents conception and retention.

This fact holds generally both in man and the other animals. Cold women, joined to ardent men, produce a number of children. A woman, on the contrary, who feels too acutely the emotions of love, is ſeldom fertile. But, in moſt women who are merely paſſive, the effect is more certain; becauſe the fruit of generation is leſs diſturbed by the convulſions of pleaſure. Theſe are ſo marked, and ſo deſtructive to the conception, in ſome females, ſuch as the ſhe-aſs, that ſhe requires cold water to be thrown on her crupper, and even heavy blows, in order to repreſs them. Without ſuch diſagreeable aids, the ſhe-aſs would ſeldom be impregnated, till age abated the fury of her paſſion. The ſame means are ſometimes employed to make mares conceive.

But, it may be ſaid, that female dogs and cats, which ſeem to be more ardent than the mare and ſhe-aſs, never fail to conceive; and, there-

fore, that the fact advanced concerning the infecundity of females whoſe feelings are exquiſite, is too general, and admits of many exceptions. But the example of dogs and cats, inſtead of being an exception, is rather a confirmation of the general rule; for, in the bitch, however violent the convulſions of the internal organs may be ſuppoſed, they have full time to be appeaſed during the long interval between conſummation and the retreat of the male, who cannot detach himſelf till the turgidity and irritation of the parts ſubſide. The female cat is in a ſimilar ſituation. Of all females, ſhe appears to be moſt ardent in her amours; for ſhe calls to the males with lamentable cries, which announce the moſt preſſing neceſſity. But, as in the dog, from a particular conformation of the male cat, this violent female never miſſes conception. Her deſires, which are exceſſive, are neceſſarily tempered with a pain almoſt equally acute. The glans of the male cat is covered with large ſharp prickles. The intromiſſion of it, therefore, muſt be extremely painful to the female, who announces her ſufferings by loud cries. The pain is ſo great, that ſhe inſtantly makes every effort to eſcape, and the male, to retain her, is obliged to ſeize her by the neck with his teeth, and to compel ſubmiſſion from the very female who had invited his embraces.

In domeſtic animals, who are well fed and taken care of, multiplication is greater than in thoſe who continue in a wild ſtate. Of this we have an example in domeſtic dogs and cats, who produce ſeveral times every year; but, when in a natural ſtate, they produce only once in the ſame period. Domeſtic birds furniſh an example ſtill more ſtriking: Can the fecundity of any ſpecies of wild birds be compared to that of a well fed hen, when properly ſerved with a cock? And, even in the human ſpecies, what a vaſt difference between the ſcanty propagation of ſavages, and the immenſe population of civilized nations, under the adminiſtration of a wiſe government? But we here confine ourſelves to the fecundity natural to animals in full poſſeſſion of liberty, the relative fertility of whom is exhibited in the following Table, from which ſome important concluſions may be drawn.

TABLE

TABLE of the Relative Fecundity of ANIMALS.

Names.	Age at which males can engender, and females produce.		Times of geſtation.	Number of young produced at a litter.	Age at which males ceaſe to engender, and females to produce.	
	MALE. Years.	FEMALE. Years.			MALE. Years.	FEMALE. Years.
Elephant	30	30	2 years	1 in 3 or 4 years	lives 200	
Rhinoceros	15 or 20	15 or 20	. . . .	1	lives 70 or 80	
Hippopotamus	. . . .	. . . .	. . . .	1	. . . .	
Walrus	. . . .	. . . .	9 months	1	. . . .	
Camel	4	4	1 year nearly	1	lives 40 or 50	
Dromedary	4	4	Idem	1	lives 40 or 50	
Horſe	2½	2	11 months	1, ſometimes 2	at 25 or 30	at 18 or 20
Zebra	2	2	11 ditto	1, rarely 2	at 25 or 30	at 18 or 20
Aſs	2	2	11 do. & more	1, rarely 2	at 25 or 30	at 25 or 30
Buffalo	3	3	9 months	1	lives 15 or 18	
Ox	2	1½	9 ditto	1, rarely 2	at 9	at 9
Stag	1½	1½	8 do. & more	1, rarely 2	lives 30 or 35	
Rain-deer	2	2	8 months	1	lives 16	
Lama	3	3	. . . .	1, rarely 2	at 12	at 12
Man	14	12	9 months	1, ſometimes 2		
Large apes	3	3	. . . .	1, ſometimes 2		
Mouflon	1½	1	5 ditto	1, ſometimes 2, twice a year in hot climates.	at 8	at 10 or 12

Names.	Age at which males can engender, and females produce.		Times of geſtation.	Number of young produced at a litter.	Age at which males ceaſe to engender, and females to produce.	
	MALE. Years.	FEMALE. Years.			MALE. Years.	FEMALE. Years.
Saiga	1	1	5 months	1, ſometimes 2	lives 15 or 20	
Roebuck	1½	2	5 ditto	1, 2, ſometimes 3	lives 12 or 15	
Chamois goat	1	1	5 ditto	1, 2, rarely 3	lives 20	
Goat	1	7 months	5 ditto	1, 2, rarely 3, and never above 4	at 7	at 7
Sheep	1	1	5 ditto	1, ſometimes 2, twice a year, in warm climates 2 or 3	at 8	at 10 or 12
Seal	. . . .	. . . .	ſeveral months			
Bear	2	2	ditto	1, 2, 3, 4, and never above 5	lives 20 or 25	
Badger	. . . .	. . . .	. . . .	3, or 4		
Lion	2	2	. . . .	3 or 4 once a year	lives 20 or 25	
Leopards and Tiger	2	2	. . . .	4 or 5 once a year		
Wolf	2	2	73 days or more	5, 6, to 9, once a year	at 15 or 20	at 15 or 20
Dog in a natural ſtate	9 or 10 months	9 or 10 months	63 days	3, 4, 5, 6	at 15	at 15

Names.	Age at which males can engender, and females produce.		Times of geſtation.	Number of young produced at a litter.	Age at which males ceaſe to engender, and females to produce.	
	MALE. Years.	FEMALE. Years.			MALE. Years.	FEMALE. Years.
Iſatis	. . . .	. . . .	63 days	6 and 7		
Fox	1	1	In ſeaſon in winter, and produces in April	3, 4, to 6	at 10 or 11	at 10 or 11
Jackal	. . . .	. . . .	. . . .	2, 3, or 4		
Cat in a natural ſtate	before 1	before 1	56 days	4, 5, or 6	at 9	at 9
Martin	1	1	56 days, it is ſaid	3, 4, and 5	at 8 or 10	at 8 or 10
Pine Weaſel	1	1	idem	3, 4, and 6	at 8 or 10	at 8 or 10
Polecat	1	1	idem	3, 4, and 6	gener. dur. life	prod. dur, life
Weaſel	1ſt year	1ſt year	. . . .	3, 4, and 5	idem	idem
Ermine	idem	idem	. . . .	idem	idem	idem
Squirrel	1	1	copulates in March, and produces in May	3 or 4	idem	idem
Flying Squirrel	. . . .	. . . .	. . . .	3 or 4		
Hedgehog	1	1	40 days	3, 4, and 5		
Dormice	1ſt year	1ſt year	. . . .	3, 4, and 5	lives 6	
Muſk Rats	. . . .	. . . .	. . . .	4, 5, or 6		
Opoſſums	. . . .	. . . .	. . . .	4, 5, 6, and 7		

Names.	Age at which males can engender, and females produce.		Times of geſtation.	Number of young produced at a litter.	Age at which males ceaſe to engender, and females to produce.	
	MALE. Years.	FEMALE. Years.			MALE. Years.	FEMALE. Years.
Hogs	1 year or 9 mos.	1 year or 9 mos.	4 months	10, 12, 15, to 20, twice a year	at 15	at 15
Armadillos	. . . .	. . . .	. . . .	4 ſeveral times a year		
Hare	1ſt year	1ſt year	30 or 31 days	2, 3, 4, ſeveral times a year	lives 7 or 8	
Rabbit	5 or 6 months	5 or 6 months	idem	4, 5, to 8, ſeveral times a year	idem	
Ferret	1ſt year	1ſt year	40 days	5, 6, to 9, twice a year	during life	
Rats	idem	idem	5 or 6 weeks	5 or 6 ſeveral times a year	idem	
Field Mice	idem	idem	1 month or 5 weeks	9 or 10 ſeveral times a year		
Mouſe	idem	idem	idem	5 or 6 ſeveral times a year	idem	
Brown Rat	idem	idem	. . . .	12 to 19 thrice a year	idem	
Guinea Pig	5 or 6 weeks	5 or 6 weeks	3 weeks	eight times a year; 1ſt litter 4 or 5; 2d, 5 or 6; and the others 7, 8, to 11	lives 6 or 7, and produces during life	

This is the order in which Nature has preſented to us the different degrees of fecundity in quadrupeds; and from it we perceive, that this fecundity diminiſhes in proportion to the magnitude of the animal. In general, this ſcale of fecundity extends to all the other tribes of animated Nature. Small birds are more prolific than the larger kinds. The ſame thing holds in fiſhes, and perhaps in inſects. But, confining our remarks to quadrupeds alone, it appears from the above table, that the hog is the only exception to the general rule; for, from the ſize of his body, he ſhould be ranked with thoſe animals which produce only two or three, once in twelve months, while, in fact, he is equally prolific with ſmall quadrupeds.

This table contains all that is known with regard to the fertility of pure ſpecies. But the fecundity of mixed ſpecies, which is always leſs than that of the pure, merits particular attention. The reaſon will be apparent, by ſuppoſing, for example, that all the males in the horſe ſpecies, and all the ſhe-aſſes, or, rather, all the jack-aſſes and all the mares, were deſtroyed: In this caſe, thoſe mixed animals alone, which we call *mules* and *bardeaux*, would be produced; and the number brought forth would be much fewer than that of horſes or aſſes; becauſe the natural conformities or relations between the horſe and ſhe-aſs, or between the jack-aſs and mare, are leſs than between the horſe and mare, or the male

and female aſs. It is the number of conformities and diſſimilarities which conſtitutes or diſtinguiſhes ſpecies; and, ſince the ſpecies of the aſs has at all times been ſeparated from that of the horſe, it is apparent, that, by mixing theſe two ſpecies, whether by means of females or males, we diminiſh the number of conformities which conſtitute the ſpecies. Hence the males will engender and the females produce ſeldomer, and with more difficulty; and even thoſe mixed ſpecies, if their conformities were fewer, would become entirely barren. Mules of every kind, therefore, muſt be rare; becauſe it is only by being deprived of its natural female, that any animal will intermix with a female of a different ſpecies. Even when mongrel animals approach each other with ſome degree of warmth, their produce is neither ſo certain nor ſo frequent as in pure ſpecies, where the number of conformities is greater. Now, the produce of mixed ſpecies will be leſs frequent, in proportion to the infecundity of the pure ſpecies from whom they proceed; and the produce of animals proceeding from mixed ſpecies will always diminiſh in proportion as they recede from the original ſtock; becauſe the conformities between them and any other animal are augmented. For example, I am perſuaded, from the reaſons above aſſigned, that an intercourſe between two bardeaux would be abortive. Beſides, theſe animals proceed from two ſpecies which are not very fertile, and are

alſo

alſo under the influence of the ſame cauſes which often prevent the ſhe-aſs from conceiving with her own male. I am more uncertain with regard to the ſterility of *mules* properly ſo called; becauſe they are not liable to the laſt cauſe of barrenneſs; for, as the mare conceives more eaſily than the ſhe-aſs, and the jack-aſs is more ardent than the horſe, their reſpective prolific powers are greater, and their produce not ſo rare as that of the ſhe-aſs and horſe. The mules, of courſe, will be leſs barren than the bardeaux. I ſuſpect, however, that two mules never engender; and I preſume, even from the examples of fertile mules, that they owe their impregnation to the aſs, rather than to the mule; for we ought not to regard the he-mule as the natural male of the ſhe-mule, though they both have the ſame name, or, rather, differ only in ſex.

To explain this matter, let us ſuppoſe an order of kindred in ſpecies, like that which takes place in families. The horſe and mare will be brother and ſiſter in ſpecies, and parents in the firſt degree. It is the ſame with the male and female aſs. But, if the male aſs is given to the mare, they are only couſins in ſpecies, or kindred in the ſecond degree. The mule produced by them, participating one half of both ſpecies, will be removed to the third degree of kindred. Hence the male and female mule, though proceeding from the ſame father and mother, inſtead of being brother and ſiſter in ſpecies, are only

only kindred in the fourth degree; and, of courſe, will produce more difficultly between themſelves, than the jack-aſs and mare, who are kindred ſpecies in the ſecond degree. For the ſame reaſon, the male and female mules will not produce ſo eaſily between themſelves, as with the mare or aſs; becauſe the kindred of the latter in ſpecies is only in the third degree, while that of the former is in the fourth degree. The infecundity, which appears in the ſecond degree, ſhould be more conſpicuous in the third, and perhaps abſolute in the fourth.

In general, kindred of ſpecies is one of thoſe myſteries of Nature, which man can never unravel, without a long continued and difficult ſeries of experiments. How can we otherwiſe learn, than by the union of different ſpecies of animals many thouſand times repeated, the degree of their kindred? Is the aſs more allied to the horſe than the zebra? Does the wolf approach nearer to the dog than the fox or jackal? At what diſtance from man ſhall we place the large apes, who reſemble him ſo perfectly in conformation of body? Are all the ſpecies of animals the ſame now that they were originally? Has not their number augmented, inſtead of being diminiſhed? Have not the feeble ſpecies been deſtroyed by the ſtronger, or by the tyranny of man, the number of whom has become a thouſand times greater than that of any other large animal? What relation can be eſtabliſhed

between kindred ſpecies, and another kindred ſtill better known, that of different races in the ſame ſpecies? Does not a race, like the mixed ſpecies, proceed from an anomalous individual, which forms the original ſtock? In the dog ſpecies, there is, perhaps, a race ſo rare, that it is more difficult to procreate than the mixed ſpecies proceeding from the aſs and mare. How many queſtions does this ſubject admit of; and how few of them are we in a condition to ſolve? How many facts muſt be diſcovered before we can even form probable conjectures? However, inſtead of being diſcouraged, the philoſopher ought to applaud Nature, even when ſhe is moſt myſterious, and to rejoice that, in proportion as he removes one part of her veil, ſhe exhibits an immenſity of other objects, all worthy of his reſearches. For, what we already know ought to point out what may ſtill be known. There is no boundary to the human intellect. It extends in proportion as the univerſe is diſplayed. Hence man can and ought to attempt every thing: He wants nothing but time to enable him to obtain univerſal knowledge. By multiplying his obſervations, he might foreſee all the phænomena and all the events of Nature with equal certainty, as if he deduced them from their immediate cauſes: And what enthuſiaſm can be more pardonable, or rather more noble, than to believe that man is capable, by his labours, to

diſcover

diſcover all the powers and myſteries of Nature!

Theſe labours conſiſt chiefly in making obſervations and experiments, from which we diſcover new truths. For example, the union of animals of different ſpecies, by which alone we can learn their kindred, has never been ſufficiently tried. The facts we have been able to collect concerning this union, whether voluntary or forced, are ſo few, that we are not in a condition to aſcertain the exiſtence of *jumars*. This name was firſt given to mules ſaid to have proceeded from the bull and mare; but it has likewiſe been applied to denote mongrels alleged to have been procreated by the jack-aſs and cow. Dr. Shaw tells us, that, in the provinces of Tunis and Algiers, 'there is a little ſerviceable 'beaſt of burden, called *kumrah*, begot betwixt 'an *aſs* and a *cow*. That which I ſaw at Al-'giers (where it was not looked upon as a rari-'ty) was ſingle hoofed like the aſs, but diſtin-'guiſhed from it in having a ſleeker ſkin, with 'the tail and the head (though without horns) 'in faſhion of the dam's *.'

Thus we have already two kinds of jumars, the one proceeding from the bull and mare, and the other from the jack-aſs and cow. A third is mentioned by Merolle, and is pretended to proceed from the bull and ſhe-aſs. 'There 'was a beaſt of burden which proceeds from

* Shaw's Travels, p. 166.

'the bull and ſhe-aſs, and is obtained by cover-
'ing the aſs with a cow's ſkin, in order to de-
'ceive the bull*.'

But I am equally doubtful concerning the exiſtence of all the three kinds of jumars; though I pretend not to deny the poſſibility of the fact. I have even enumerated ſome facts which prove an actual copulation between animals of very different ſpecies; but their embraces were ineffectual. Nothing ſeems to be more remote from the amiable character of the dog than the brutal manners and inſtinct of the hog; and the form of their bodies is as different as their natural diſpoſitions. I have ſeen, however, two examples of a violent attachment between a dog and a ſow. Even during this very ſummer 1774, a large ſpaniel diſcovered a violent paſſion for a ſow which was in ſeaſon: They were ſhut up together for ſeveral days; and all the domeſtics were witneſſes of the mutual ardour of theſe two animals. The dog exerted many violent efforts to copulate with the ſow; but the diſſimilarity of their organs prevented their union †. The ſame thing happened ſome years before ‡. Hence animals, though of a very different ſpecies, may contract a ſtrong affection to each other; for it is certain, that in the above examples, nothing prevented the union of the dog and ſow but the

* Voyage de Merolle au Congo, en 1682.

† This fact happened in the houſe of M. le Comte de la Feuillée, in Burgundy.

‡ At Billy, near Chanceau in Burgundy.

conformation of their organs. It is not equally certain, however, that if conſummation had taken place, production would have followed. It often happens, that animals of different ſpecies ſpontaneouſly unite. Theſe voluntary unions ought to be prolific, ſince they imply that the natural repugnance, which is the chief obſtacle, is ſurmounted, and alſo a conformity between the organs. No fertility, however, has reſulted from ſuch commixtures. Of this an example recently paſſed before my eyes. In 1767, and ſome ſucceeding years, the miller at my eſtate of Buffon kept a mare and a bull in the ſame ſtable, who contracted ſuch a paſſion for each other, that as often as the mare came in ſeaſon, the bull covered her three or four times every day. Theſe embraces were repeated during ſeveral years, and gave the maſter of the animals great hopes of ſeeing their offspring. Nothing, however, reſulted from them. All the inhabitants of the place were witneſſes to this fact, which proves, that, in our climate at leaſt, the bull cannot procreate with the mare, and renders this firſt kind of jumar extremely ſuſpicious. I have not equal evidence to oppoſe to the ſecond kind, which Dr. Shaw ſays proceeds from the jack-aſs and cow. I acknowledge, that though the diſſimilarities in ſtructure appear to be nearly equal in both caſes, the poſitive teſtimony of a traveller ſo well informed as Dr. Shaw, ſeems to give a greater degree of probability to the exiſt-

ence of this ſecond kind of jumar than we have for the firſt. With regard to the third jumar, proceeding from the bull and ſhe-aſs, I am perſuaded, notwithſtanding the authority of Merolle, that it has no more exiſtence than the one ſuppoſed to be produced by the bull and mare. The nature of the bull is ſtill farther removed from that of the ſhe-aſs, than from that of the mare: And the unfertility of the mare and bull, which is aſcertained by the above examples, ſhould apply with greater force to the union of the bull and aſs.

The NOMENCLATURE of APES.

TO teach children, and to addreſs men, are two very different offices. Children receive without examination, and even with avidity, the arbitrary and the real, the true and the falſe, whenever they are preſented to them under the form of precepts. Men, on the contrary, reject with contempt all precepts which are not founded on ſolid principles. We ſhall, therefore, adopt none of thoſe methodical diſtributions by which, under the appellation of *ape*, a multitude of animals, belonging to very different ſpecies, have been huddled together in one indiſcriminate maſs.

What I call an *ape* is an animal without a tail, whoſe face is flat, whoſe teeth, hands, fingers, and nails reſemble thoſe of man, and who, like him, walks erect on two feet. This definition, derived from the nature of the animal itſelf, and from its relations to man, excludes all animals who have tails; all thoſe who have prominent faces or long muzzles; all thoſe who have crooked or ſharp claws; and all thoſe who walk more willingly on four than on two legs. According to this preciſe idea, let us examine how many ſpecies of animals ought to be ranked under the denomination of *ape*. The ancients knew only

one. The *pithecos* of the Greeks, and the *ſimia* of the Latins, is a true *ape*, and was the ſubject upon which Ariſtotle, Pliny, and Galen inſtituted all the phyſical relations they diſcovered between that animal and man. But this ape, or pigmy of the ancients, which ſo ſtrongly reſembles man in external ſtructure, and ſtill more ſtrongly in its internal organization, differs from him, however, by a quality, which, though relative in itſelf, is not the leſs eſſential. This quality is magnitude. The ſtature of man, in general, exceeds five feet; that of the *pithecos*, or pigmy, never riſes above one fourth of this height. Hence, if this ape had been ſtill more ſimilar to man, the ancients would have been juſtified for regarding it only as an *homunculus*, an imperfect dwarf, a pigmy, capable of combating with cranes; while man knew how to tame the elephant and conquer the lion.

But, ſince the diſcovery of the ſouthern regions of Africa and India, we have found another ape poſſeſſing this quality of magnitude; an ape as tall and ſtrong as man, and equally ardent for woman as for its own females; an ape who knows how to bear arms, to attack his enemies with ſtones, and to defend himſelf with clubs. Beſides, he reſembles man ſtill more than the pigmy; for, independent of his having no tail, of his flat face, of the reſemblance of his arms, hands, toes, and nails to ours, and of his walking conſtantly on end, he has a kind of viſage with

with features which approach to thoſe of the human countenance, a beard on his chin, and no more hair on his body than men have, when in a ſtate of nature. Hence the inhabitants of his country, the civilized Indians, have not heſitated to aſſociate him with the human ſpecies, under the denomination of *Orang-outang*, or *wild man*; while the Negroes, almoſt equally wild, and as ugly as theſe apes, who imagine not that civilization exalts our nature, have given it the appellation of *pongo*, which is the name of a beaſt, and has no relation to man. This orang-outang or pongo is only a brute, but a brute of a kind ſo ſingular, that man cannot behold it without contemplating himſelf, and without being thoroughly convinced that his body is not the moſt eſſential part of his nature.

Thus, we have diſcovered two animals, the pigmy and the orang-outang, to which the name of *ape* ought to be applied. There is a third, to which, though more deformed both in relation to man and to the ape, this appellation cannot be refuſed. This animal, which till now was unknown, and was brought from the Eaſt-Indies, under the name of *gibbon*, walks on end, like the other two, and has a flat face. He likewiſe wants a tail. But his arms, inſtead of being proportioned to the height of his body, like thoſe of man, the orang-outang, or the pigmy, are ſo enormouſly long, that, when ſtanding on his two feet, he touches the ground with his hands, without

without bending either his body or limbs. This ape is the third and laſt to which the name ought to be applied: In this genus, he conſtitutes a ſingular or monſtrous ſpecies, like the race of thick-legged men, ſaid to inhabit the iſland of St. Thomas *.

After the apes, another tribe of animals preſent themſelves, to which we ſhall give the generic name of *baboon*. To diſtinguiſh them more accurately from the other kinds, let it be remarked, that the baboon has a ſhort tail, a long face, a broad high muzzle, canine teeth, proportionally larger than thoſe of man, and calloſities on his buttocks. By this definition, we exclude from the baboon tribe all the apes who have no tail; all the monkeys, whoſe tails are as long or longer than their bodies; and all thoſe who have thin, ſharp pointed muzzles. The ancients had no proper names for theſe animals. Ariſtotle alone ſeems to have pointed out one of the baboons under the name *ſimia porcaria* †, though he has given but a very imperfect idea of the animal. The Italians firſt called it *babuino*; the Germans, *bavion*; the French, *ba-*

* See the Diſſertation on the Varieties of the Human Species, Vol. III. of this work.

† The denomination *ſimia porcaria*, which is employed by no other author but Ariſtotle, was not improperly applied to denote the baboon; for I find in the works of ſeveral travellers, who probably never read Ariſtotle, the muzzle of the baboon compared to the ſnout of a hog. Beſides, theſe animals have ſome reſemblance in the form of their bodies.

bouin;

bouin; the Britiſh, *baboon*; and all the modern writers of Latin, *papio*. We ſhall call it *baboon*, to diſtinguiſh it from the other ſpecies which have ſince been diſcovered in the ſouthern regions of Africa and India. We are acquainted with three ſpecies of theſe animals: 1. The *baboon* properly ſo called, which is found in Lybia, Arabia, &c. and is probably the *ſimia porcaria* of Ariſtotle. 2. The *mandrill*, or *ribbed-noſe*, is ſtill larger than the baboon, has a violet-coloured face, the noſe and cheeks ribbed with deep oblique furrows, and is found in Guiney and in the warmeſt provinces of Africa. 3. The *ouanderou*, which is ſmaller than the baboon and mandrill; its body is thinner, its head and face are ſurrounded with a kind of long buſhy mane, and it is found in Ceylon, Malabar, and other ſouthern regions of India. Thus we have properly defined three ſpecies of apes, and three ſpecies of baboons, which are all very different from one another.

But, as Nature knows none of our definitions, as ſhe has not claſſed her productions by bundles or genera, and as her progreſs is always gradual and marked by minute ſhades, ſome intermediate animal ſhould be found between the ape and baboon. This intermediate ſpecies actually exiſts, and is the animal which we call *magot*, or the *Barbary ape*. It occupies a middle ſtation between our two definitions. It forms the ſhade between the apes and baboons. It differs from

the

the firſt by having a long muzzle and large canine teeth; and, from the ſecond, becauſe it actually wants the tail, though it has an appendix of ſkin, which has the appearance of a very ſmall tail. Of courſe, it is neither an ape nor a baboon, but, at the ſame time, partakes of the nature of both. This animal, which is very common in Higher Egypt, as well as in Barbary, was known to the ancients. The Greeks and Romans called it *cynocephalus*, becauſe its muzzle reſembled that of a dog. Let us now arrange theſe animals in their proper order: The *orang-outang* is the firſt ape; the *pigmy* the ſecond; and the *gibbon*, though different in figure, the third; the *cynocephalus* or *magot* the fourth ape, or the firſt baboon; the *papio* is the firſt baboon; the *mandrill* the ſecond; and the *ouanderou*, or little baboon, the third. This order is neither arbitrary nor fictitious, but agreeable to the ſcale of Nature.

After the apes and baboons, come the *guenons*, or *monkeys*; that is, animals reſembling the apes and baboons, but which have tails as long, or longer than their bodies. The word *guenon* has, for ſome ages, had two acceptations different from that we have here given: It is generally employed to ſignify ſmall apes, and ſometimes to denote the female of the ape. But, more anciently, we called *ſinges*, or *magots*, the apes without a tail, and *guenons*, or *mones*, thoſe which had long tails. This fact appears from the works

words of ſome travellers * in the ſixteenth and ſeventeenth centuries. The word *guenon* is probably derived from *kébos*, or *képos*, which the Greeks employed to denote the long-tailed apes. Theſe *kébes*, or *guenons*, are ſmaller and weaker than the apes and baboons. They are eaſily diſtinguiſhable from one another by this difference, and particularly by their long tail. With equal eaſe they may be diſtinguiſhed from the *makis* or *maucaucos*; becauſe they have not a ſharp muzzle, and, inſtead of ſix cutting teeth, like the makis, they have only four, like the apes and baboons. We know eight ſpecies of guenons; and, to prevent confuſion, we ſhall beſtow on each a proper name: 1. The *macaque*, or hare-lipped monkey; 2. The *patas*, or red monkey; 3. The *malbrouk*; 4. The *mangabey*, or monkey with the upper eye-lids of a pure white colour; 5. The *mone*, or varied monkey; 6. The *callitrix*, or green monkey: 7. The *mouſtac*, or whiſkered monkey; 8. The *talapoin*; 9. The *douc*, or monkey of Cochinchina. The ancient Greeks knew only two of theſe *guenons*,

* In Senegal there are ſeveral ſpecies of apes, as the *guenons*, with a long tail; and the *magots*, who have no tail; *Voyage de la Maire, p.* 101.—— In the mountains of South America, there is a kind of *mones*, or long-tailed monkeys, which the ſavages call *cacuyen*. They are of the ſame ſize with the common kind, from which they differ only by having a beard on their chin.——Along with theſe *mones*, there are found a number of ſmall yellow animals, called *ſagouins*; *Singularités de la Fr. Antarct. par Thevet, p.* 103.

or

or long-tailed monkeys, namely, the mone and the callitrix, who are natives of Arabia and the northern parts of Africa. They had no idea of the other kinds; becauſe theſe are found only in the ſouthern provinces of Africa and the Eaſt Indies, countries entirely unknown in the days of Ariſtotle. This great philoſopher, and the Greeks in general, were too wiſe to confound beings by common, and, therefore, equivocal names. They call the ape without a tail *pithecos*, and the monkey with a long tail, *kébos*. As they knew theſe animals to be diſtinct ſpecies, they gave to each a proper name, derived from their moſt ſtriking characters. All the apes and baboons which they knew, namely, the *pigmy*, the *cynocephalus*, or *magot*, and the *ſimia porcaria*, or *papio*, have their hair nearly of a uniform colour. But the monkey, which we have called *mone*, and the Greeks *kébos*, has hair of different colours, and is generally known by the name of the *varied ape*. This ſpecies of monkey was moſt common, and beſt known in the days of Ariſtotle; and, from its moſt diſtinguiſhed character, he calls it *kébos*, which, in Greek, ſignifies *varieties in colour*. Thus all the animals belonging to the claſs of apes, baboons, and monkeys, mentioned by Ariſtotle, are reduced to four, the *pithecos*, the *cynocephalos*, the *ſimia porcaria*, and the *kébos*; which we believe to be the *pigmy*, the *magot*, or Barbary ape, the *baboon*, and the *mone*, or varied monkey, not only

only becauſe they agree with the characters given of them by Ariſtotle, but likewiſe becauſe the other ſpecies muſt have been unknown to the ancients, ſince they are natives of countries into which the Greek travellers had never penetrated.

Two or three centuries after Ariſtotle, we find, in the Greek writers, two new names, *callithrix* and *cercopithecos*, both relative to the *guenons*, or long-tailed monkeys. In proportion as diſcoveries were made of the ſouthern regions of Africa and Aſia, we found new animals, and other ſpecies of monkeys; and, as moſt of theſe monkeys had not, like the *kébos*, various colours, the Greeks invented the generic name *cercopithecos* or *tailed ape*, to denote all the ſpecies of monkeys or apes with long tails; and, having remarked, among theſe new ſpecies, a monkey with hair of a lively greeniſh colour, they called it *callithrix*, which ſignifies *beautiful hair*. This callithrix is found in the ſouth part of Mauritania, and in the neighbourhood of Cape de Verd, and is commonly known by the name of the *green ape*.

With regard to the other ſeven ſpecies of monkeys, mentioned above under the appellations of *makaque*, *patas*, *malbrouk*, *mangabey*, *mouſtac*, *talapoin*, and *douc*, they were unknown to the Greeks and Latins. The makaque is a native of Congo; the patas of Senegal; the mangabey, of Madagaſcar; the malbrouk, of Bengal; the mouſtac, of Guiney; the talapoin, of Siam;

and the douc, of Cochinchina. All theſe territories were equally unknown to the ancients.

As the progreſs of Nature is uniform and gradual, we find between the baboons and monkeys an intermediate ſpecies, like that of the magot between the apes and baboons. The animal which fills this interval has a great reſemblance to the monkeys, particularly to the makaque; its muzzle, at the ſame time, is very broad, and its tail ſhort, like that of the baboons. Being ignorant of its name, we have called it *maimon*, or *pig-tailed baboon*, to diſtinguiſh it from the others. It is a native of Sumatra. Of all the monkeys or baboons, it alone has a naked tail; and, for this reaſon, ſeveral authors have given it the denomination of the *pig-tailed*, or *rat-tailed apes*.

We have now enumerated all the animals of the Old World, to whom the common name of *ape* has been applied, though they belong not only to different ſpecies, but to different genera. To augment the confuſion, the ſame names of *ape*, *cynocephalus*, *kébos*, and *cercopithecos*, which had been invented by the Greeks fifteen centuries ago, have been beſtowed on animals peculiar to the New World, though ſo recently diſcovered. They never dreamed that none of the African or Eaſt Indian animals had any exiſtence in the ſouthern regions of the New Continent. In America, we have diſcovered animals with hands and fingers. This ſimilarity was alone

ſufficient

ſufficient to procure to them the name of *apes*, without conſidering that, for the transference of a name, identity of genus, and even of ſpecies, is neceſſary. Now, theſe American animals, of which we ſhall make two claſſes, under the appellations of *ſapajous*, or monkeys with prehenſile tails; and *ſagoins*, or monkeys with long tails, which are not prehenſile, or want the faculty of laying hold of any object, are very different from the apes of Aſia and Africa; and, in the ſame manner, as no apes, baboons, or monkeys are to be found in the New World, there are neither ſapajous nor ſagoins in the Old. Though we have already given a general view of theſe facts, in our diſſertation concerning the animals of both Continents, we can now prove them in a more particular manner, and demonſtrate, that, of ſeventeen ſpecies, to which all the animals of the Old World called *apes*, may be reduced, and, of twelve or thirteen in the New World, to whom this name has been tranſferred, none of them are the ſame, or to be found equally in both Worlds; for, of the ſeventeen ſpecies in the Old Continent, three or four apes muſt firſt be retrenched, who certainly exiſt not in America, and to whom the ſapajous and ſagoins have no reſemblance. In the ſecond place, three or four baboons muſt likewiſe be retrenched: They are larger than the ſapajous and ſagoins, and alſo very different in figure. There remain only nine monkeys with whom

any compariſon can be inſtituted. Now, all theſe monkeys, as well as the apes and baboons, have general and particular characters, which ſeparate them entirely from the ſapajous and ſagoins. The firſt of theſe characters is to have naked buttocks, and natural calloſities peculiar to theſe parts. The ſecond is to have *abajoues*, or pouches under the cheeks, in which they can keep their victuals. The third is to have a narrow partition between the noſtrils, and the apertures of the noſtrils themſelves placed in the under part of the noſe, like thoſe of man. The ſapajous and ſagoins have none of theſe characters. The partition between their noſtrils is always very thick; the apertures of their noſtrils are ſituated in the ſides of the noſe, and not in the under part of it. They have hair on their buttocks and no calloſities. They have no pouches under the cheeks. Hence they differ from the monkeys not only in ſpecies, but in genus, ſince they poſſeſs none of the general characters which are common to the whole tribe of monkeys. This difference of genus neceſſarily implies greater differences in ſpecies, and ſhows that theſe animals are very remote from each other.

It is with much impropriety, therefore, that the names *ape* and *monkey* have been applied to the *ſapajous* and *ſagoins*. We muſt preſerve their names, and, inſtead of aſſociating them with the apes, we ſhould begin by comparing them

them with one another. Theſe two tribes differ from each other by a remarkable character: All the ſapajous uſe their tail as a finger to hang upon branches, or to lay hold of any object they cannot reach with their hand. The ſagoins, on the contrary, have not the power of employing their tail in this manner. Their face, ears, and hair are alſo different: We may, therefore, ſeparate them into two diſtinct genera. In giving the hiſtory of the ſpecies, I ſhall avoid all thoſe denominations which can only apply to the apes, baboons, and monkeys, and preſerve the names they receive in their native country.

We are acquainted with ſix or ſeven ſpecies of ſapajous, and ſix of ſagoins, moſt of which have ſome varieties. We have carefully ſearched all the writings of travellers in order to diſcover the proper name of each ſpecies; becauſe the names they receive in the places they inhabit generally point out ſome peculiar characteriſtic, which alone is ſufficient to diſtinguiſh them from one another.

With regard to the varieties, which, in this claſs of animals, are perhaps more numerous than the ſpecies, we ſhall endeavour to refer each of them to their proper kinds. We have had forty of theſe animals alive, each of which differed more or leſs from one another; and to us it appears that the whole may be reduced to thirty ſpecies, namely, three apes, and an intermediate ſpecies between them and the baboons; three

baboons, and an intermediate ſpecies between them and the monkeys; nine monkeys; ſeven ſapajous; and ſix ſagoins. All the others, or at leaſt moſt of them, ought to be regarded as varieties only. But, as we are uncertain whether ſome of theſe varieties may not be diſtinct ſpecies, we ſhall endeavour to give all of them proper names.

On this occaſion, let us conſider terreſtrial animals, ſome of which have a great reſemblance to man, in a new point of view. The whole have improperly received the general name of *quadrupeds*. If the exceptions were few, we would not have found fault with the application of this name. It was formerly remarked, that our definitions and denominations, however general, never comprehend the whole; that beings always exiſt which elude the moſt cautious definitions which ever were invented; that intermediate beings are always diſcovered; that ſeveral of them, though apparently holding a middle ſtation, eſcape from the liſt; and that the general names, under which we mean to include them, are incomplete; becauſe Nature ſhould be conſidered by unities only, and not by aggregates; becauſe man has invented general denominations with the ſole view of aiding his memory, and ſupplying the defects of his underſtanding; and becauſe he afterwards fooliſhly conſidered theſe general names as realities; and, in fine, becauſe he has en-

deavoured to comprehend under them beings, and even whole claſſes of beings, which required different appellations. I can give an example, without departing from the claſs of quadrupeds, which, of all animals, we are beſt acquainted with, and, of courſe, were in a condition to have beſtowed on them the moſt preciſe denominations.

The name *quadruped* ſuppoſes that the animal has *four feet*. If it wants two feet, like the manati; if it has arms and hands, like the ape; or if it has wings, like the bat; it is not a quadruped. Hence this general term, when applied to theſe animals, is abuſed. To obtain preciſion in words, the ideas they preſent muſt be ſtrictly true. If we had a term for two hands ſimilar to that which denotes two feet, we might then ſay that man was the only biped and *bimanus*, becauſe he alone has two hands and two feet; that the manati is a *bimanus*; that the bat is only a biped; and that the ape is a *quadrimanus*, or four-handed animal. Let us now apply theſe new denominations to all the particular beings to which they belong, and we ſhall find, that, from about two hundred animals who go under the common name of *quadrupeds*, thirty-five ſpecies of apes, baboons, monkeys, ſapajous, ſagoins, and makis, muſt be retrenched, becauſe they are *quadrimanus*, or four-handed; and that to theſe thirty-five ſpecies, the loris, or tailleſs maucauco, the Virginian, murine, and Mexican

opoſſum, the Egyptian and woolly jerboa's, &c. ſhould be added, becauſe they are four-handed like the apes and monkeys. Thus the liſt of four-handed animals being at leaſt forty ſpecies, the real number of quadrupeds is one fifth diminiſhed. We muſt likewiſe retrench twelve or fifteen ſpecies of bipeds, namely, the bats, whoſe fore-feet are rather wings than feet, and likewiſe three or four jerboa's, becauſe they can walk on their hind feet only, the fore feet being too ſhort. If we ſubtract alſo the manati, which has no hind feet, the arctic and Indian walrus, and the ſeals, to whom the hind feet are uſeleſs; and, if we ſtill retrench thoſe animals which uſe their fore feet like hands, as the bears, the marmots, the coati's, the agouti's, the ſquirrels, the rats, and many others, the denomination of *quadruped* will appear to be applied improperly to more than one half of theſe animals. The whole and cloven-hoofed are indeed the only real quadrupeds. When we deſcend to the digitated claſs, we find four-handed, or ambiguous quadrupeds, who uſe their fore feet as hands, and ought to be ſeparated or diſtinguiſhed from the others. Of whole-hoofed animals, there are three ſpecies, the horſe, the aſs, and the zebra. If to theſe we add the elephant, the rhinoceros, the hippopotamus, and the camel, whoſe feet, though terminated by nails, are ſolid, and ſerve the animals for walking only, we ſhall have ſeven

ſpecies

ſpecies to which the name of *quadruped* is perfectly applicable. The number of cloven-hoofed animals greatly exceeds that of the whole-hoofed. The oxen, the ſheep, the goats, the antilopes, the bubalus, the lama, the pacos, the giraffe, the elk, the rain-deer, the ſtag, the fallow-deer, the roebuck, &c. are all cloven-footed, and conſtitute about forty ſpecies. Thus we have already fifty animals, ten whole and forty cloven-hoofed, to whom the name *quadruped* is properly applied. In the digitated animals, the lion, tiger, panther, leopard, lynx, cat, wolf, dog, fox, hyæna, badger, polecat, weaſels, ferret, porcupines, hedgehogs, armadillos, ant-eaters, and hogs, which laſt conſtitute the ſhade between the digitated and cloven-footed tribes, form a number conſiſting of more than forty ſpecies, to which the term of *quadruped* applies with perfect preciſion; becauſe, though their fore feet be divided into four or five toes, they are never uſed as hands. But all the other digitated ſpecies, who uſe their fore feet in carrying food to their mouths, are not, in ſtrict propriety of language, quadrupeds. Theſe ſpecies, which likewiſe amount to forty, make an intermediate claſs between quadrupeds and four-handed animals, being neither the one nor the other. Hence, to more than a fourth of our animals, the name of *quadruped* does not apply; and to more than a half of them, the application of it is incomplete.

The four-handed animals fill the interval between man and the animals; and the two-handed ſpecies conſtitute a mean term in the diſtance between man and the cetaceous tribes. The bipeds with wings form the ſhade between quadrupeds and birds; and the digitated ſpecies, who uſe their fore feet as hands, fill the whole ſpace between the quadrupeds and the four-handed kinds. But I will purſue this ſubject no farther: However uſeful it may be for acquiring a diſtinct knowledge of animals, it is ſtill more ſo by affording a freſh proof, that all our definitions or general terms want preciſion, when applied to the objects or beings which they repreſent.

But why are theſe definitions and general terms, which appear to be the moſt brilliant exertions of the human intellect, ſo defective in their application? Does the error neceſſarily ariſe from the narrow limits of our underſtanding? Or, rather, does it not proceed ſolely from our incapacity of combining and perceiving at one time a great number of objects? Let us compare the works of Nature with thoſe of man. Let us examine how both operate, and inquire whether the mind, however acute, can follow the ſame route, without loſing itſelf in the immenſity of ſpace, in the obſcurity of time, or in the infinity of related beings. When man directs his mind to any object, if his perceptions be accurate, he takes the ſtraight line,

runs

runs over the ſmalleſt ſpace, and employs the leaſt poſſible time in accompliſhing his end. What an expence of thought, how many combinations are neceſſary to avoid thoſe deceitful and fallacious roads which at firſt preſent themſelves in ſuch numbers, that the choice of the right path requires the niceſt diſcernment? This path, however, is not beyond the reach of the human intellect, which can proceed without deviating from the ſtraight line. The mind is enabled to arrive at a point by means of a line; and, if another point muſt be gained, it can only be attained by another line. The train of our ideas is a delicate thread, which extends in length, without any other dimenſions. Nature, on the contrary, never moves a ſtep which extends not on all ſides, and runs at once through the three dimenſions of length, breadth, and thickneſs. While man reaches but one point, Nature accompliſhes a ſolid, by penetrating the whole parts which compoſe a maſs. In beſtowing form on brute matter, our ſtatuaries, by the union of art and time, are enabled to make a ſurface which exactly repreſents the outſide of an object. Every point of this ſurface requires a thouſand combinations. Their genius is directly exerted upon as many lines as there are ſtrokes in the figure. The ſmalleſt deviation would be a deformity. This marble, ſo perfect that it ſeems to breathe, is, of courſe, only a multitude of points at which the artiſt arrives by a long ſucceſſion of labour; becauſe human genius, being unable to ſeize more than

than one dimenſion at the ſame time, and our ſenſes reaching no farther than ſurfaces, we cannot penetrate matter: But Nature, in a moment, puts every particle in motion. She produces forms by exertions almoſt inſtantaneous. She at once developes them in all their dimenſions. As ſoon as her movements reach the ſurface, the penetrating forces with which ſhe is animated operate internally. The ſmalleſt atom, when ſhe chooſes to employ it, is inſtantly compelled to obey. Hence ſhe acts, at the ſame time, on all ſides, before, behind, above, below, on the right and left; and, conſequently, ſhe embraces not only the ſurface, but every particle of the maſs. How different likewiſe is the product? What compariſon is there between a ſtatue and an organized body? How unequal, at the ſame time, are the powers, how diſproportioned the inſtruments? Man can employ only the power he poſſeſſes. Limited to a ſmall quantity of motion, which he can only communicate by the mode of impulſion, his exertions are confined to ſurfaces; becauſe, in general, the impulſive force is only tranſmitted by ſuperficial contact. He neither ſees nor touches more than the ſurfaces of bodies; and, when he wiſhes to attain a more intimate knowledge, though he opens and divides, ſtill he ſees and touches nothing more than their ſurfaces. To penetrate the interior parts of bodies, he would require a portion of that force which acts upon the maſs, or of gravity, which is Nature's chief inſtrument. If man could employ this penetrating

trating force as he does that of impulſion, or if he had a ſenſe relative to it, he would be enabled to perceive the eſſence of matter, and to arrange ſmall portions of it, in the ſame manner as Nature operates at large. It is owing to the want of inſtruments, therefore, that human art cannot approach that of Nature. His figures, his pictures, his deſigns, are only ſurfaces, or imitations of ſurfaces; becauſe the images he receives by his ſenſes are all ſuperficial, and he has no mode of giving them a body.

What is true with regard to the arts, applies likewiſe to the ſciences. The latter, however, are not ſo much limited; becauſe the mind is their chief inſtrument, and becauſe, in the former, it is ſubordinate to the ſenſes. But, in the ſciences, the mind commands the ſenſes as often as it is employed in thinking and not in operating, in comparing and not in imitating. Now, the mind, though bound up by the ſenſes, though often deceived by their fallacious reports, is neither diminiſhed in its purity nor activity. Man, who naturally loves knowledge, commenced by rectifying and demonſtrating the errors of the ſenſes. He has treated them as mechanical inſtruments, the effects of which muſt be ſubmitted to the teſt of experiment. Proceeding thus with the balance in one hand, and the compaſs in the other, he has meaſured both time and ſpace. He has recogniſed the whole outſide of Nature; and, being unable to penetrate her internal parts by his ſenſes,

ſenſes, his deductions concerning them have been drawn from compariſon and analogy. He diſcovered that there exiſts in matter a general force, different from that of impulſion, a force which falls not under the cogniſance of our ſenſes, and which, though we are incapable of uſing it, Nature employs as her univerſal agent. He has demonſtrated, that this force belongs equally to all matter, in proportion to its maſs or real quantity; and that its action extends to immenſe diſtances, decreaſing as the ſpaces augment. Then, turning his views upon living beings, he perceived that heat was another force neceſſary to their production; that light was a matter endowed with infinite elaſticity and activity; that the formation and expanſion of organized bodies were effects of a combination of all theſe forces; that the extenſion and growth of animals and vegetables follow the laws of the attractive force, and are effected by an augmentation in the three dimenſions at the ſame time; and that a mould, when once formed, muſt, by theſe laws of affinity, produce a ſucceſſion of other moulds perfectly ſimilar to the original. By combining theſe attributes, common to the animal and vegetable, he recogniſed, that there exiſted in both an inexhauſtible, circulating ſtore of organic ſubſtance; a ſubſtance equally real as brute matter; a ſubſtance which continues always in a live as the other does in a dead ſtate; a ſubſtance univerſally diffuſed, which paſſes from

vegetables

vegetables to animals by means of nutrition, returns from animals to vegetables by the proceſs of putrefaction, and maintains a perpetual circulation for the animation of beings. He perceived, that theſe active organic particles exiſted in all organized bodies; that they were combined, in ſmaller or greater quantities, with dead matter; that they were more abundant in animals, in whom every thing is alive, and more rare in vegetables, in which death predominates, and life ſeems to be extinct, organization being ſurcharged with brute matter; and that plants are, of courſe, deprived of progreſſive motion, of heat, and of life, exhibiting no other quality of animation but expanſion and reproduction. Reflecting on the manner in which theſe laſt are accompliſhed, he diſcovered that every living being is a mould that has the power of aſſimilating the ſubſtances with which it is nouriſhed; that growth is an effect of this aſſimilation; that the developement of a living body is not a ſimple augmentation of volume, but an extenſion in all dimenſions, a penetration of new matter through all parts of the maſs; that theſe parts, by increaſing proportionally to the whole, and the whole proportionally to the parts, the form is preſerved, and continues always the ſame, till growth is completed; that, when the body has acquired its full expanſion, the ſame matter, formerly employed in augmenting its volume, is returned, as ſuperfluous, from all the parts to which it had been aſ-

ſimilated,

ſimilated, and, by uniting in a common point, forms a new being perfectly ſimilar to the firſt, and, to attain the ſame dimenſions, requires only to be developed by the ſame mode of nutrition. He perceived that man, quadrupeds, cetaceous animals, birds, reptiles, inſects, trees, and herbs, were nouriſhed, expanded, and reproduced by the ſame law; and that the mode of their nutrition and generation, though depending on the ſame general cauſe, appeared to be very different, becauſe it could not operate but in a manner relative to the form of each particular ſpecies of being. Proceeding gradually in his inveſtigation, he began, after a ſucceſſion of ages, to compare objects. To diſtinguiſh them from each other, he gave them particular names; and, to unite them under one point of view, he invented general terms. Taking his own body as the phyſical model of all animated beings, he meaſured, examined, and compared all their parts, and he diſcovered that the form of every animal which breathes is nearly the ſame; that, by diſſecting an ape, we may learn the anatomy of a man; that, taking another animal, we always find the ſame fund of organization, the ſame ſenſes, the ſame viſcera, the ſame bones, the ſame fleſh, the ſame motion of the fluids, the ſame play and action of the ſolids. In all of them he found a heart, veins, and arteries, and the ſame organs of circulation, reſpiration, digeſtion, nutrition, and ſecretion; in all of them, he found a ſolid ſtruc-

ture compoſed of the ſame pieces, and nearly ſituated in the ſame manner. This plan proceeds uniformly from man to the ape, from the ape to quadrupeds, from quadrupeds to cetaceous animals, to birds, to fiſhes, and to reptiles: This plan, I ſay, when well apprehended by the human intellect, exhibits a faithful picture of animated Nature, and affords the moſt general as well as the moſt ſimple view under which ſhe can be conſidered: And, when we want to extend it, and to paſs from the animal to the vegetable, we perceive this plan, which had at firſt varied only by ſhades, gradually degenerating from reptiles to inſects, from inſects to worms, from worms to zoophytes, from zoophytes to plants; and, though changed in all its external parts, ſtill preſerving the ſame character, the principal features of which are nutrition, growth, and reproduction. Theſe features are common to all organized ſubſtances. They are eternal and divine; and, inſtead of being effaced by time, it only renews and renders them more conſpicuous.

If, from this grand picture of reſemblances exhibited in animated Nature, as conſtituting but one family, we paſs to that of the differences, where each ſpecies claims a ſeparate apartment, and a diſtinct portrait, we ſhall find, that, with the exception of a few large kinds, ſuch as the elephant, the rhinoceros, the hippopotamus, the tiger, and the lion, which ought to have particular

cular frames, all the others ſeem to unite with their neighbours, and to form groups of degraded ſimilarities, or genera, repreſented by our nomenclators in a net-work of figures, ſome of which are ſupported by the feet, others by the teeth, by the hair, and others by relations ſtill more minute: And even the apes, whoſe form ſeems to be moſt perfect, or approaches neareſt to that of man, preſent themſelves in a group, and require the utmoſt attention to be diſtinguiſhed from each other; becauſe the privilege of ſeparate ſpecies depends leſs on figure than magnitude; and man himſelf, though a diſtinct ſpecies, and infinitely removed from that of all other animals, being only of a middle ſize, has a greater number of neighbouring ſpecies than the very large kinds. In the hiſtory of the orang-outang, we ſhall find, that, if figure alone be regarded, we might conſider this animal as the firſt of apes, or the moſt imperfect of men; becauſe, except the intellect, the orang-outang wants nothing that we poſſeſs, and, in his body, differs leſs from man than from the other animals which receive the denomination of *apes*.

Hence mind, reflection, and language depend not on figure, or on the organization of the body. Theſe are endowments peculiar to man. The orang-outang, though he neither thinks nor ſpeaks, has a body, members, ſenſes, a brain, and a tongue perfectly ſimilar to thoſe of man: He counterfeits every human movement; but

he

he performs no action that is characteriſtic of man. This imperfection is perhaps owing to want of education, or to an error in our judgment. You compare, it may be ſaid, an ape in the woods with a man in poliſhed ſociety. But, in order to form a proper judgment of them, a ſavage man and an ape ſhould be viewed together; for we have no juſt idea of man in a pure ſtate of nature. The head covered with briſtly hair, or with curled wool; the face veiled with a long beard; two creſcents of hairs ſtill groſſer, by their length and prominency, contract the front, and not only obſcure the eyes, but ſink and round them like thoſe of the brutes; the lips thick and protruded; the noſe flat; the aſpect wild and ſtupid; the ears, the body, and the members covered with hair; the breaſts of the female long and flabby, and the ſkin of her belly hanging down as far as her knees; the children wallowing in filth, and crawling on their hands and feet; the father and mother ſitting ſquat on their hams, both hideous, and beſmeared with corrupted greaſe. This ſketch, drawn from a ſavage Hottentot, is a flattering portrait; for the diſtance between man in a pure ſtate of nature and a Hottentot, is greater than between a Hottentot and us. But, if we want to compare the ape to man, we muſt add the relations of organization, the conformities of temperament, the vehement appetite of the males for the females, the ſame ſtructure of genitals in both ſexes, the

periodic courſes of the female, the voluntary or forced intermixture of the Negreſſes with the apes, the produce of which has entered into both ſpecies; and then conſider, on the ſuppoſition that they are not the ſame, how difficult it is to perceive the interval by which they are ſeparated.

If our judgment were limited to figure alone, I acknowledge that the ape might be regarded as a variety of the human ſpecies. The Creator has not formed man's body on a model abſolutely different from that of the mere animal. He has comprehended the figure of man, as well as that of all other animals, under one general plan. But, at the ſame time that he has given him a material form ſimilar to that of the ape, he has penetrated this animal body with a divine ſpirit. If he had conferred the ſame privilege, not on the ape, but on the meaneſt, and what appears to us to be the worſt conſtructed animal, this ſpecies would ſoon have become the rival of man; it would have excelled all the other animals by thinking and ſpeaking. Whatever reſemblance, therefore, takes place between the Hottentot and the ape, the interval which ſeparates them is immenſe; becauſe the former is endowed with the faculties of thought and of ſpeech.

Who will ever be able to aſcertain how the organization of an idiot differs from that of another man? Yet the defect is certainly in the material

terial organs, ſince the idiot is likewiſe endowed with a ſoul. Now, as between one man and another, where the whole ſtructure is perfectly ſimilar, a difference ſo ſmall that it cannot be perceived is ſufficient to prevent thought, we ſhould not be ſurprized that it never appears in the ape, who is deprived of the neceſſary principle.

The ſoul, in general, has a proper action totally independent of matter. But, as its Divine Author has been pleaſed to unite it to the body, the exerciſe of its particular acts depends on the ſtate of the material organs. This dependence is apparent, not only from the caſe of idiots, but from people affected with delirium, from ſleep, from new-born infants, who cannot think, and from very old men, whom the power of thinking has forſaken. It is even probable, that the chief effect of education conſiſts not ſo much in inſtructing the mind, or maturing its operations, as in modifying the material organs, and bringing them into the moſt favourable ſtate for the exerciſe of the ſentient principle. Now, there are two kinds of education, which ought to be carefully diſtinguiſhed, becauſe their effects are extremely different; the education of the individual, which is common to man and the other animals; and the education of the ſpecies, which appertains to man alone. A young animal, both from natural incitements and from example, learns, in a few weeks, to do every thing its pa-

rents can perform. To an infant, ſeveral years are neceſſary before it acquires this degree of perfection; becauſe, when brought forth, it is incomparably leſs advanced, weaker, and more imperfectly formed, than the ſmaller animals. In early infancy, the mind is nothing, when compared to the powers it will afterwards acquire. In receiving individual education, therefore, the infant is much ſlower than the brute; but, for this very reaſon, it becomes ſuſceptible of that of the ſpecies. The multiplicity of ſuccours, the continual cares, which the ſtate of imbecility for a long time requires, cheriſh and augment the attachment of the parents. In training the body, they cultivate the mind. The time employed in ſtrengthening the former gives an advantage to the latter. The bodily powers of moſt animals are more advanced in two months than thoſe of the infant in two years. Hence the time employed in beſtowing on the infant its individual education, is as twelve to one, without eſtimating the fruits of what follows after this period, without conſidering that animals ſeparate from their parents as ſoon as they can provide for themſelves, and that, not long after this ſeparation, they know each other no more. All education ceaſes the moment that the aid of the parents becomes unneceſſary. This time of education being ſo ſhort, its effects muſt be very limited: It is even aſtoniſhing that the animals acquire, in two months, all that is neceſſary for them

them during the reſt of life: If we ſuppoſe that a child, in an equal period, were ſtrong enough to quit his parents, and never return to them, would there be any perceptible difference between this infant and a brute? However ingenious the parents, they would not have time ſufficient to modify and prepare his organs, or to eſtabliſh the ſmalleſt communication of thought between their minds and his. They could not excite his memory by impreſſions frequently enough reiterated. They could not even mollify or unfold the organs of ſpeech. Before a child can pronounce a ſingle word, his ears muſt be ſtruck many thouſand times with the ſame ſound; and, before he can make a proper application of it, the ſame combination of the word and the object to which it relates, muſt be many thouſand times preſented to him. Education, therefore, which alone can develope the powers of the mind, muſt be uninterruptedly continued for a long time. If ſtopt, not at two months, as in the animals, but even at the age of one year, the mind of the infant, having received no inſtruction, would remain inactive like that of the idiot, the defect of whoſe organs prevents the reception of knowledge. This reaſoning would acquire redoubled ſtrength, if the infant were born in a pure ſtate of nature, if it were confined to the ſole tutorage of a Hottentot mother, and were enabled by its bodily powers to ſeparate from her at the age of two months. Would it not

ſink below the condition of an idiot, and, with regard to its material part, be entirely levelled with the brutes? But in this condition of nature, the firſt education requires an equal time as in the civilized ſtate; for, in both, the infant is equally feeble, and equally ſlow in its growth; and, conſequently, demands the care of its parents during an equal period. In a word, if abandoned before the age of three years, it would infallibly periſh. Now, this neceſſary, and ſo long continued intercourſe between the mother and child, is ſufficient to communicate to it all that ſhe poſſeſſes: And though we ſhould falſely ſuppoſe, that a mother, in a ſtate of nature, poſſeſſes nothing, not even the faculty of ſpeech, would not this long intercourſe with her infant produce a language? Hence a ſtate of pure nature, in which man is ſuppoſed neither to think nor ſpeak, is imaginary, and never had an exiſtence. This neceſſity of a long intercourſe between parents and children produces ſociety in the midſt of a deſert. The family underſtand each other both by ſigns and ſounds; and this firſt ray of intelligence, when cheriſhed, cultivated, and communicated, unfolds, in proceſs of time, all the germs of cogitation. As this habitual intercourſe could not ſubſiſt ſo long, without producing mutual ſigns and ſounds, theſe ſigns and ſounds, always repeated and gradually engraven on the memory of the child, would become permanent expreſſions. The catalogue of words, though

ſhort,

ſhort, forms a language which will ſoon extend as the family augments, and will always follow, in its improvement, the progreſs of ſociety. As ſoon as ſociety begins to be formed, the education of the infant is no longer individual, ſince the parents communicate to it not only what they derive from Nature, but likewiſe what they have received from their progenitors, and from the ſociety to which they belong. It is no longer a communication between detached individuals, which, as in the animals, would be limited to the tranſmiſſion of ſimple faculties, but an inſtitution of which the whole ſpecies participate, and whoſe produce conſtitutes the baſis and bond of ſociety.

Even among brute animals, though deprived of the ſentient principle, thoſe whoſe education is longeſt appear to have moſt intelligence. The elephant, which takes the longeſt time in acquiring its full growth, and requires the ſuccour of its mother during the whole firſt year of its exiſtence, is alſo the moſt intelligent of all animals. The Guiney-pig, which is full grown, and capable of generating at the age of three weeks, is for this reaſon alone, perhaps, one of the moſt ſtupid ſpecies. With regard to the ape, whoſe nature we are endeavouring to aſcertain, however ſimilar to man, he is ſo ſtrongly marked with the features of brutality, that it is diſtinguiſhable from the moment of his birth. He is then proportionally ſtronger and better formed than the infant: He grows faſter: The ſupport

of his mother is neceſſary for a few months only: His education is purely individual, and conſequently as limited as that of the other animals.

Hence the ape, notwithſtanding his reſemblance to man, is a brute, and, inſtead of approaching our ſpecies, holds not the firſt rank among the animals; becauſe he is by no means the moſt intelligent. The relation of corporeal reſemblance alone has given riſe to the prejudice in favour of the great faculties of the ape. He reſembles man, it has been ſaid, both externally and internally; and, therefore, he muſt not only imitate us, but do every thing which we perform. We have ſeen, that all the actions which ought to be denominated *human*, are relative to ſociety; that they depend, at firſt, on the mind, and afterwards on education, the phyſical principle of which is the long intercourſe that neceſſarily ſubſiſts between the parents and children; that, in the ape, this intercourſe is very ſhort; that, like the other animals, he receives only an individual education; and that he is not ſuſceptible of that of the ſpecies. Of courſe, he can perform no human actions, ſince no action of the ape has the ſame principle, or the ſame deſign. With regard to imitation, which appears to be the moſt ſtriking character of the ape-kind, and which the vulgar have attributed to him as a peculiar talent, before we decide, it is neceſſary to inquire whether this imitation be ſpontaneous or forced. Does the ape imitate us from inclination,

tion, or becauſe, without any exertion of the will, he feels the capacity of doing it? I appeal to all thoſe who have examined this animal without prejudice, and I am convinced that they will agree with me, that there is nothing voluntary in this imitation. The ape, having arms and hands, uſes them, as we do, but without thinking of us. The ſimilarity of his members and organs neceſſarily produces movements, and ſometimes ſucceſſions of movements, which reſemble ours. Being endowed with the human ſtructure, the ape muſt move like man. But the ſame motions imply not that he acts from imitation. Two bodies which receive the ſame impulſe, two ſimilar pendulums or machines, will move in the ſame manner. But theſe bodies or machines can never be ſaid to imitate each other in their motions. The ape and the human body are two machines ſimilarly conſtructed, and neceſſarily move nearly in the ſame manner. But parity is not imitation. The one depends on matter, and the other on mind. Imitation preſuppoſes the deſign of imitating. The ape is incapable of forming this deſign, which requires a train of thinking; and, conſequently, man, if he inclines, can imitate the ape; but the ape cannot even incline to imitate man.

This parity is only the phyſical part of imitation, and by no means ſo complete as the ſimilitude, from which, however, it proceeds as an immediate effect. The ape has a greater reſemblance

blance to us in his body and members, than in the uſe he makes of them. By obſerving him attentively, we eaſily perceive, that all his movements are briſk, intermittent, and precipitous; and that, in order to compare them with thoſe of man, we muſt adopt another ſcale, or rather a different model. All the actions of the ape are derived from his education, which is purely animal. To us they appear ridiculous, inconſequent, and extravagant; becauſe, by referring them to our own, we aſſume a falſe ſcale, and a deceitful mode of meaſuring. As his nature is vivacious, his temperament warm, his diſpoſitions petulant, and none of his affections have been ſoftened or reſtrained by education, all his habitudes are exceſſive, and reſemble more the movements of a maniac than the actions of a man, or even of a peaceable animal. It is for this reaſon that we find him indocile, and that he receives with difficulty the impreſſions we wiſh to make on him. He is inſenſible to careſſes, and is rendered obedient by chaſtiſement alone. He may be kept in captivity, but not in a domeſtic ſtate. Always melancholy, ſtubborn, repugnant, or making grimaces, he may be ſaid to be rather conquered than tamed. The ſpecies, of courſe, have never been rendered domeſtic in any part of the world, and, conſequently, is farther removed from man than moſt other animals: For docility implies ſome analogy between the giver and the receiver of in-

ſtruction. It is a relative quality, which cannot be exerted but when there is a certain number of common faculties on both ſides, that differ only between themſelves, becauſe they are active in the maſter and paſſive in the ſcholar. Now, the paſſive qualities of the ape have leſs relation to the active qualities of man than thoſe of the dog or elephant, who require no more than good treatment to communicate to them the delicate and gentle ſenſations of faithful attachment, voluntary obedience, grateful ſervice, and unreſerved devotion.

In relative qualities, therefore, the ape is farther removed from the human race than moſt other animals. His temperament is alſo very different. Man can inhabit every climate. He lives and multiplies in the northern as well as the ſouthern regions of the earth. But the ape exiſts with difficulty in temperate countries, and can multiply only in thoſe which are warm. This difference of temperament implies others in organization, which, though concealed, are not the leſs real: It muſt likewiſe have a great influence on his natural diſpoſitions. The exceſs of heat, which is neceſſary to the conſtitution and vigour of this animal, renders all his qualities and affections inordinate. No other cauſe is requiſite to account for his petulance, his ſalaciouſneſs, and his other paſſions, which appear to be equally violent and diſorderly.

Thus

Thus the ape, which philoſophers, as well as the vulgar, have regarded as a being difficult to define, and whoſe nature was at leaſt equivocal, and intermediate between that of man and the animals, is, in fact, nothing but a real brute, endowed with the external mark of humanity, but deprived of thought, and of every faculty which properly conſtitutes the human ſpecies; a brute inferior to many others in his relative powers, and ſtill more eſſentially different from the human race by his nature, his temperament, and the time neceſſary to his education, geſtation, growth, and duration of life; that is, by all the real habitudes which conſtitute what is called *Nature* in a particular being.

The ORANG-OUTANGS, or the PONGO* and JOCKO†.

WE ſhall give the hiſtory of theſe two animals under one article; becauſe it is not improbable they belong to the ſame ſpecies. Of all

* In the Eaſt Indies this animal is called *orang-outang*; in Lowando, a province of Congo, *pongo*; and, in ſome parts of the Eaſt Indies, according to Kjoep, chap. lxxxvi. quoted by Linnæus, *kukurlacko*.

Homo ſylveſtris. Orang-outang; *Bontius*, *p.* 84.

Satyri ſylveſtres. *Orang-outang* dicti; *Icones Arborum, ut et Animalium*, Lugd. Bat. *apud Vanderaa, tab. antepenult.*

Traglodytes. Homo nocturnus; *Linn. Syſt. p.* 33.

Oran-outan; *Beakman's Travels.*

Oerangs-oetangs; *Voyages de Gauthier Schoutten aux Indes Orientales.*

Drill; *Charleton, Exercit. p.* 16.

Smitten; *Boſman, Voyage de Guinée, p.* 528.

Barris, according to ſeveral voyagers, pongo; *Battel, Purchaſs*, &c.

† *Jocko, enjocko*, the names of this animal in Congo; *baris* in Guiney, according to Pyrard, *p.* 369. *Nieremberg, p.* 179.

Chimpanzee; *Scotin's print*, 1738.

Man of the wood; *Edwards, p.* 213.

Barrys; *Barbet's Guiney, p.* 101.

Quojas marrou; *ibid. p.* 115.

Satyrus Indicus; *Tulpii Obſerv. Med. lib.* iii. *c.* 56.

Homo ſylveſtris, ourang-outang; *Tyſon's Anatomy of a Pigmy, p.* 108.

Simia ſatyrus, ecaudata, ferruginea, lacertorum pilis reverſis, natibus tectis; *Linn. Syſt. Nat. p.* 34.

L'homme

all the apes, they have the greateſt reſemblance to man; and, conſequently, deſerve particular attention. We have ſeen the ſmall orang-outang, or jocko, alive, and have preſerved its ſkin. But of the pongo, or great orang-outang, we can only give the relations of travellers. If theſe were faithful, if they were not often obſcure, falſe, and exaggerated, we could not heſitate in pronouncing it to be a different ſpecies from the jocko, a ſpecies more perfect, and approaching nearer to that of man. Bontius, who was chief phyſician of Batavia, and has left us ſome excellent remarks on the natural hiſtory of that part of the Indies, ſays expreſsly *, that he ſaw, with admiration, ſome individuals of this

L'homme de bois, ſimia unguibus omnibus planis et rotundatis, cæſarie faciem cingente; *Briſſon, Quad. p.* 134.

Mr. Pennant, in his Synopſis of Quadrupeds, p. 96. makes but one ſpecies of the pongo and jocko, of which he gives the following deſcription:

Great ape with a flat face, and a deformed reſemblance of the human; ears exactly like thoſe of a man; hair on the head longer than on the body; body and limbs covered with reddiſh and ſhaggy hair; longeſt hair on the back, thinneſt on the fore parts; face and paws ſwarthy; buttocks covered with hair.

* Quod meretur admirationem, vidi ego aliquot utriuſque ſexus erecte incedentes imprimis (cujus effigiem hic exhibeo) ſatyram femellam tanta verecundia ab ignotis ſibi hominibus occulentem, tum quoque faciem manibus (liceat ita dicere) tegentem, ubertimque lacrymantem, gemitus cientem, et cæteros humanos actus exprimentem, ut nihil humani ei deeſſe diceres præter loquelam. . . . Nomen ei indunt *ourang-outang*, quod hominem ſilvæ ſignificat; *Jac. Bont. Hiſt. Nat. Ind. cap.* xxxii. *p.* 84 *et* 85.

ſpecies

ſpecies walking on two feet, and, among others, a female (of which he gives a figure) who ſeemed to have a ſenſe of modeſty, who covered herſelf with her hand when men appeared of whom ſhe had no acquaintance, who wept, groaned, and ſeemed to want nothing of humanity but the faculty of ſpeech. Linnæus *, upon the authority of Kjoep, and ſome other voyagers, tells us, that the orang-outang is not deprived of this faculty; that he thinks, ſpeaks, and expreſſes himſelf by a kind of hiſſing words. This author calls him *homo nocturnus*, and, at the ſame time, gives ſuch a deſcription of him, that it is impoſſible to aſcertain whether he is a brute or a man. It may, however, be remarked, that, according to Linnæus, this being, whatever he is, exceeds not the half of the human ſtature; and, as Bontius takes no notice of the magnitude of his orang-outang, we may preſume that they are the ſame. But this orang-outang of Linnæus and Bontius would not be the true kind, which is larger than the talleſt man. Neither is he the jocko, which I have

* Homo nocturnus. Homo ſylveſtris *Orang-outang* Bontii. Corpus album, inceſſu erectum, noſtro dimidio minus, pili albi contortuplicati, oculi orbiculati, iridi pupillaque aurea. Palpebræ antice incumbentes cum membrana nictitante. Viſus lateralis, nocturnus. Ætas viginti quinque annorum. Die cæcutit, latet; noctu videt, exit, furatur. *Loquitur ſibilo, cogitat, credit ſui cauſa factam tellurem, ſe aliquando iterum fore imperantem,* ſi fides peregrinatoribus. . . . Habitat in Javæ, Amboinæ, Ternatæ ſpeluncis; *Linn. Syſt. Nat. edit.* x. *p.* 24.

ſeen

ſeen alive; for, though he was of the ſame ſize with that deſcribed by Linnæus, he differed in every other character. I ſaw him frequently, and I can affirm, that he neither ſpoke, nor expreſſed himſelf by hiſſing, and that he did nothing which a well trained dog could not perform. Beſides, he differs in almoſt every article from Linnæus's deſcription of the orang-outang, and correſponds better with the *ſatyrus* of the ſame author. For theſe reaſons, I ſuſpect the truth of the deſcription of this *homo nocturnus*. I even doubt of his exiſtence. It has probably been a white Negro, a Chacrelas *, whom the voyagers quoted by Linnæus have ſuperficially examined and falſely deſcribed. For the Chacrelas, like the *homo nocturnus* of this author, have white, woolly, frizled hair, red eyes, a feeble voice, &c. But they are men, and neither hiſs, nor are they pigmies of thirty inches high: They think and act like other men, and are alſo of the ſame ſize.

Throwing aſide, therefore, this ill deſcribed being, and ſuppoſing a little exaggeration in the relation of Bontius concerning the modeſty of his female orang-outang, there only remains a brute creature, an ape, of which we ſhall find more pointed information in writers of better credit. Edward Tyſon †, a celebrated Engliſh anatomiſt, who has given an excellent deſcription

* See vol. iii. art. *Varieties of the Human Species.*

† The Anatomy of a Pigmy.

both

both of the external and internal parts of the orang-outang, tell us, that there are two ſpecies, and that the one he deſcribed is not ſo large as the other which is called *barris* * or *baris* by travellers, and *drill* by the Britiſh. This *barris* or *drill* is the large orang-outang of the Eaſt Indies, or the pongo of Guiney. Gaſſendi having advanced, upon the authority of a voyager called *St. Amand*, that, in the iſland of Java, there was a creature which conſtituted the ſhade between man and the ape, the fact was ſtrenuouſly denied. To prove it, Peireſe produced a letter from M. Noël *(Natalis)*, a phyſician who reſided in Africa, from which it appeared †, that large apes were found in Guiney under the denomination of *barris*, who walk on two legs, have much more gravity and intelligence than the other ſpecies, and are extremely deſirous of women. Darcos, and afterwards Nieremberg ‡ and Dapper §, give nearly the ſame account of the barris. Battel calls it *pongo*,

* The *baris* or *barris*, which they deſcribe to be much taller than our animal, probably may be what we call a *drill*; *Tyſon, Anat. of a Pigmy, p.* 1.

† Sunt in Guinea ſimiæ, barba procera canaque, et pexa propemodum venerabiles; incedunt lente, ac videntur præ cæteris ſapere; maximi ſunt et *barris* dicuntur; pollent maxime judicio, ſemel dumtaxat quidpiam docendi. Veſte induti illico bipedes incedunt. Scite ludunt fiſtula, cythara, aliiſque id genus. . . Fœminæ denique in iis patiuntur menſtrua, et mares mulierum ſunt appetentiſſimi; *Gaſſendi, lib.* v.

‡ Nieremberg, Hiſt. Nat. Peregr. lib. ix. cap. 44.

§ Deſcript. de l'Afrique, par Dapper, p. 249.

and deſcribes it in the following manner:
'The greateſt of theſe two monſters is called
'*pongo*, in their language; and the leſſer is
'called *engeco*. This *pongo* is exactly propor-
'tioned like a man; but he is more like a
'giant in ſtature; for he is very tall, and
'hath a man's face, hollow eyed, with long hair
'upon his brows. His face and ears are with-
'out hair, and his hands alſo. His body is full of
'hair, but not very thick, and it is of a dunniſh
'colour. He differeth not from a man, but in
'his legs, for they have no calf. He goeth al-
'ways upon his legs, and carrieth his hands
'claſped on the nap of his neck, when he goeth
'upon the ground. They ſleep in the trees,
'and build ſhelters for the rain. They feed
'upon fruit that they find in the woods, and
'upon nuts, for they eat no kind of fleſh. They
'cannot ſpeak, and have no underſtanding more
'than a beaſt. The people of the country, when
'they travel in the woods, make fires where
'they ſleep in the night; and in the morning,
'when they are gone, the pongos will come
'and ſit about the fire, till it goeth out; for
'they have no underſtanding to lay the wood
'together. They go many together, and kill
'many Negroes that travel in the woods.
'Many times they fall upon the elephants, which
'come to feed where they be, and ſo beat them
'with their clubbed fiſts, and pieces of wood,
'that they will run roaring away from them.

'Thoſe

'Thoſe pongos are never taken alive, becauſe 'they are ſo ſtrong, that ten men cannot hold 'one of them; but yet they take many of their 'young ones with poiſoned arrows. The young 'pongo hangeth on his mother's belly, with his 'hands faſt claſped about her; ſo that, when 'the country people kill any of the females, 'they take the young one, which hangeth faſt 'upon his mother *.' It is from this explicit paſſage that I have derived the names *pongo* and *jocko*. Battel farther remarks, that, when one of theſe animal dies, the others cover his body with branches and leaves of trees. Purchas adds in a note, that, in the converſations he had with Battel, he learned that a pongo carried off a young Negro from him, who lived a whole year in the ſociety of theſe animals; that, on his return, the Negro ſaid, that they had never injured him; that they were generally as tall as a man, but much thicker; and that they were nearly double the volume of an ordinary man. Jobſon aſſures us, that, in places frequented by theſe animals, he ſaw a kind of habitations compoſed of interlaced branches of trees, which would at leaſt protect them from the ſcorching rays of the ſun †. 'The apes of Guiney,' ſays Boſman ‡, 'which are called *ſmitten* by the

* Purchas's Pilgrims, part ii. p. 982.

† Hiſt. Gen. des Voyages, tom. iii. p. 295.

‡ Voyage de Guinée, p. 258.

'Flemiſh, are of a yellow colour, and grow to 'a great ſize. I ſaw with my eyes one which 'was five feet high. Theſe apes have an ugly 'appearance, as well as thoſe of another ſpecies 'perfectly ſimilar in every reſpect, except that 'four of them would hardly be as large as one 'of the former kind. . . . They are capable 'of being taught almoſt every thing we chooſe.' Gauthier Schoutten remarks*, 'that the apes 'called *orang-outangs* by the Indians are nearly 'of the ſame figure and ſize with men, only 'their back and reins are covered with hair, 'though there is no hair on the fore part of 'their bodies; that the females have two large 'breaſts; that their viſage is coarſe, their noſe 'flat, and even ſunk, and their ears like thoſe 'of men; that they are robuſt and active; that 'they defend themſelves againſt armed men; 'that they are paſſionately fond of women, who 'cannot paſs through the woods, without being 'ſuddenly attacked and raviſhed by theſe apes.' Dampier, Froger, and other travellers, aſſure us, that the orang-outangs carry off girls of eight or ten years of age to the tops of trees, and that it is extremely difficult to reſcue them. To theſe teſtimonies we may add that of M. de la Broſſe, who aſſures us, in his voyage to Angola in the year 1738, that the orang-outangs, which he calls *quimpezés*, 'endeavour to ſurpriſe the Ne-

* Voyage de Gaut. Schoutten.

'greſſes,

'greſſes, whom they detain for the purpoſe of 'enjoying them, and entertain them plentifully. 'I knew a Negreſs at Loango who remained 'three years with theſe animals. They grow 'from ſix to ſeven feet high. They erect huts, 'and uſe bludgeons in their own defence. They 'have flat faces, broad flat noſes, flat ears, ſkins 'clearer than thoſe of Molattoes, long thinly 'ſcattered hairs on ſeveral parts of their bodies, 'bellies extremely tenſe, and flat heels raiſed 'behind about half an inch. They walk upon 'two or four feet, at pleaſure. We purchaſed 'two young ones, a male of fourteen months of 'age, and a female of twelve,' &c.

We have thus enumerated the moſt certain facts we could collect concerning the great *orang-outang* or *pongo;* and, as magnitude is the chief character by which it differs from the jocko, I perſiſt in thinking that they are of the ſame ſpecies: For two circumſtances are at leaſt poſſible: 1. The jocko may be a permanent variety, a race much ſmaller than that of the pongo. In fact, they both inhabit the ſame climate; they live in the ſame manner; and, of courſe, ought to reſemble each other in every article, ſince they both receive equally the influences of the ſame ſoil and ſky. In the human ſpecies, have we not an example of a ſimilar variety? The Laplander and Fin, though they live under the ſame climate, differ nearly as much in ſtature,

and much more in other qualities, than the jocko differs from the great orang-outang. 2. The jocko, or ſmall orang-outang, which we have ſeen alive, as well as thoſe of Tulpius, Tyſon, and others which have been brought to Europe, were all, perhaps, young animals, who had acquired only a part of their growth. The one I ſaw was about two feet and a half high; and the Sieur Nonfoux, to whom it belonged, aſſured me that it exceeded not two years of age. On the ſuppoſition, therefore, that its growth were proportional to that of man, it might, if it had lived, have arrived at the height of more than five feet. The orang-outang of Tyſon was ſtill younger; for it was only about two feet high, and its teeth were not perfectly formed. Thoſe of Tulpius and Edwards were nearly of the ſame ſtature with the one I ſaw. Hence it is probable, that theſe young animals, if poſſeſſed of liberty in their own climate, would have acquired with age the ſame height and dimenſions which travellers have aſcribed to the great orang-outang. Of courſe, till better information be received, we muſt regard theſe two animals as conſtituting but one ſpecies.

The orang-outang which I ſaw, walked always on two feet, even when carrying things of conſiderable weight. His air was melancholy, his gait grave, his movements meaſured, his diſpoſitions gentle, and very different from thoſe

of

of other apes. He had neither the impatience of the Barbary ape, the maliciouſneſs of the baboon, nor the extravagance of the monkeys. It may be alleged, that he had the benefit of inſtruction; but the other apes, which I ſhall compare with him, were educated in the ſame manner. Signs and words were alone ſufficient to make our orang-outang act: But the baboon required a cudgel, and the other apes a whip; for none of them would obey without blows. I have ſeen this animal preſent his hand to conduct the people who came to viſit him, and walk as gravely along with them as if he had formed a part of the company. I have ſeen him ſit down at table, unfold his towel, wipe his lips, uſe a ſpoon or a fork to carry the victuals to his mouth, pour his liquor into a glaſs, and make it touch that of the perſon who drank along with him. When invited to take tea, he brought a cup and ſaucer, placed them on the table, put in ſugar, poured out the tea, and allowed it to cool before he drank it. All theſe actions he performed, without any other inſtigation than the ſigns or verbal orders of his maſter, and often of his own accord. He did no injury to any perſon: He even approached company with circumſpection, and preſented himſelf as if he wanted to be careſſed. He was very fond of dainties, which every body gave him: And, as his breaſt was diſeaſed, and he was afflicted with a teazing cough, this quantity of ſweetmeats undoubtedly

contributed to ſhorten his life. He lived one ſummer in Paris, and died in London the following winter. He eat almoſt every thing; but preferred ripe and dried fruits to all other kinds of food. He drank a little wine; but ſpontaneouſly left it for milk, tea, or other mild liquors. Tulpius *, who gives a good deſcription and a figure of one of theſe animals, that had been preſented to Frederick Henry, Prince of Orange, makes nearly the ſame obſervations with regard to it, as I have already related. But, if we wiſh to diſtinguiſh the inſtincts peculiar

* Erat hic ſatyrus quadrupeds, ſed ab humana ſpecie quam præ ſe fert vocatur Indis *ourang-outang*, homo ſilveſtris, uti Africanis *quojaſmorrou:* Exprimens longitudine puerum trimum, ut craſſitie ſexennem; corpore erat nec obeſo nec gracili, ſed quadrato, habiliſſimo tamen ac perniciſſimo. Artubus vero tam ſtrictis et muſculis adeo vaſtis, ut quidvis et auderet et poſſet. Anterius undique glaber, at pone hirſutus ac nigris crinibus obſitus. Facies mentiebatur hominem; ſed nares ſimæ et aduncæ rugoſam et edentulam anum. Aures vero nil diſcrepant ab humana forma, uti neque pectus ornatam utrinque mamma prætumida (erat enim ſexus fœminei). Venter habebat umbilicum profundiorem, et artus, cum ſuperiores tum inferiores, tam exactam cum homine ſimilitudinem ut vix ovum ovo videris ſimilius. Nec cubito defuit debita commiſſura, nec manibus digitorum ordo; nedum pollici figura humana vel cruribus ſuræ vel pedi calcis fulcrum. Quæ concinna ac decens membrorum forma in cauſſa fuit, quod multoties incederet erectus, neque attolleret minus gravate, quam transferret facile qualecumque graviſſimi oneris pondus. Bibiturus prehendebat canthari anſam manu altera; alteram vero vaſis fundo ſupponens, abſtergebat deinde madorem labiis relictum. — Eandem dexteritatem obſervabat cubitum iturus; inclinans caput in pulvinar et corpus ſtragulis convenienter operiens, &c.; *Tulpii, Obſerv. Medicæ, lib.* iii. *c.* 56.

to

to this animal from the improvement it receives by education, we muſt compare the facts of which we have been eye-witneſſes, with the relations of travellers who have ſeen it in a ſtate of nature, in the full poſſeſſion of liberty, and in captivity. M. de la Broſſe, who purchaſed from a Negro two orang-outangs, whoſe age exceeded not twelve months, does not ſay that they had been inſtructed by the Negro. It appears, on the contrary, that they ſpontaneouſly performed moſt of the actions above recited. 'Theſe animals,' he remarks, 'have the inſtinct of ſitting at table like men. They eat every kind of food, without diſtinction. They uſe a knife, a fork, or a ſpoon, to cut or lay hold of what is put in their plate. They drink wine and other liquors. We carried them aboard. At table, when they wanted any thing, they made themſelves be underſtood to the cabbin-boy: And, when the boy refuſed to give them what they demanded, they ſometimes became enraged, ſeized him by the arm, bit, and threw him down. . . . . The male was ſeized with ſickneſs on the road. He made himſelf be attended as a human being. He was even bled twice in the right arm: And, whenever he found himſelf afterwards in the ſame condition, he held out his arm to be bled, as if he knew that he had formerly received benefit from that operation.'

Henry

Henry Groſs informs us, vol. i. p. 233. ‘ That ſome places towards the hills are covered ‘ with immenſe impenetrable foreſts, which afford ‘ a ſhelter for wild beaſts of all ſorts. But in ‘ that which forms the inland boundary of the ‘ Carnatic Rajah's dominions, there is one ſin- ‘ gular ſpecies of creatures, of which I had heard ‘ much in India, and the truth of which the ‘ following fact, that happened ſome time before ‘ my arrival there, may ſerve for an atteſtation.

‘ Vancajee, a merchant of that country, and ‘ an inhabitant on the ſea-coaſt, ſent up to Bom- ‘ bay to the then governour of it, Mr. Horne, a ‘ couple of thoſe creatures before mentioned, as ‘ a preſent, by a coaſting veſſel, of which one ‘ Captain Boag was the maſter, and the make of ‘ which, according to his deſcription, and that of ‘ others, was as follows:

‘ They were ſcarcely two feet high, walked ‘ erect, and had perfectly a human form. They ‘ were of a ſallow white, without any hair, ex- ‘ cept in thoſe parts that it is cuſtomary for man- ‘ kind to have it. By their melancholy, they ‘ ſeemed to have a rational ſenſe of their cap- ‘ tivity, and had many of the human actions. ‘ They made their bed very orderly in the cage ‘ in which they were ſent up, and, on being view- ‘ ed, would endeavour to conceal, with their ‘ hands, thoſe parts that modeſty forbids mani- ‘ feſting. The joints of their knees were not

're-entering, like thoſe of monkeys, but ſaliant, 'like thoſe of men; a circumſtance they have '(if I miſtake not), in common with the orang-'outangs in the eaſtern parts of India, in Su-'matra, Java, and the ſpice-iſlands, of which 'theſe ſeem to be the diminutives, though with 'nearer approaches of reſemblance to the human 'ſpecies. But, though the navigation from the 'Carnatic coaſt to Bombay is of a very ſhort 'run, of not above ſix or ſeven degrees, whether 'the ſea air did not agree with them, or that 'they could not brook their confinement, or that 'Captain Boag had not properly conſulted their 'proviſions, the female ſickening firſt, died; and 'the male giving all the demonſtrations of grief, 'ſeemed to take it to heart ſo, that he refuſed 'to eat, and, in two days after, followed her. 'The Captain, on his return to Bombay, report-'ing this to the governour, was by him aſked, 'What he had done with the bodies? He ſaid 'he had flung them over-board. Being further 'aſked, why he did not keep them in ſpirits? 'he replied bluntly, that he did not think of it. 'Upon this, the governour wrote afreſh to Van-'cajee, and deſired him to procure another 'couple, at any rate, as he ſhould grudge no 'expence to be maſter of ſuch a curioſity. Van-'cajee's anſwer was, he ſhould very willingly 'oblige him, but that he was afraid it would not 'be in his power: That theſe creatures came 'from a foreſt about ſeventy leagues up the

'country,

'country, where the inhabitants would ſome-
'times catch them on the ſkirts of it; but that
'they were ſo exquiſitely cunning and ſly, that
'this ſcarcely happened once in a century.'

Francis Pyrard * relates, 'That, in the pro-
'vince of Sierra Leona, there is a ſpecies of
'animals called *baris*, who are ſtrong and well
'limbed, and ſo induſtrious, that, when proper-
'ly trained and fed, they work like ſervants;
'that they generally walk on the two hind feet;
'that they pound any ſubſtances in a mortar;
'that they go to bring water from the river in
'ſmall pitchers, which they carry full on their
'heads. But, when they arrive at the door, if
'the pitchers are not ſoon taken off, they allow
'them to fall; and, when they perceive the
'pitcher overturned and broken, they weep and
'lament.' Father Jarric, quoted by Nieremberg †, ſays the ſame thing, nearly in the ſame terms. With regard to the education of theſe animals, the teſtimony of Schoutten ‡ accords with that of Pyrard. 'They are taken,' he remarks, 'with ſnares, taught to walk on their
'hind feet, and to uſe their fore feet as hands in
'performing different operations, as rinſing
'glaſſes, carrying drink round the company,
'turning a ſpit,' &c. 'I ſaw, at Java,' ſays Guat ‖,

* Voyage de Francois Pyrard, tom. ii. p. 331.
† Euſ. Nieremberg. Hiſt. Nat. Peregrin. lib. ix. cap. 45.
‡ Voyages de Gaut. Schoutten aux Indes Orientales.
‖ Voyages de Fr. le Guat, tom. ii. p. 96.

'a very

'a very extraordinary ape. It was a female. She 'was very tall, and often walked erect on her 'hind feet. On theſe occaſions, ſhe concealed 'with her hands the parts which diſtinguiſh the 'ſex. Except the eye-brows, there was no hair 'on her face, which pretty much reſembled the 'groteſque female faces I ſaw among the Hotten-'tots at the Cape. She made her bed very neat-'ly every day, lay upon her ſide, and covered 'herſelf with the bed-clothes. . . . When her 'head ached, ſhe bound it up with a handker-'chief; and it was amuſing to ſee her thus 'hooded in bed. I could relate many other 'little articles which appeared to be extremely 'ſingular. But I admired them not ſo much as 'the multitude; becauſe, as I knew the deſign 'of bringing her to Europe to be exhibited as a 'ſhew, I was inclined to think that ſhe had been 'taught many of theſe monkey-tricks, which 'the people conſidered as being natural to the 'animal. She died in our ſhip, about the lati-'tude of the Cape of Good Hope. The figure 'of this ape had a very great reſemblance to 'that of man,' &c. Gemelli Carreri tells us, that he ſaw one of theſe apes, which cried like an infant, walked upon its hind feet, and carried a matt under his arm to lie down and ſleep upon. Theſe apes, he adds, appear, in ſome reſpects, to have more ſagacity than men: For, when the fruits on the mountains are exhauſted, they come down to the ſea-coaſts, where they feed upon

upon crabs, oyſters, and other ſhell-fiſhes. There is a ſpecies of oyſter called *taclovo*, which weighs ſeveral pounds, and commonly lies open on the ſhore. The ape, when he wants to eat one of them, being afraid leſt it ſhould cloſe on his paw, puts a ſtone into the ſhell, which prevents it from ſhutting, and then eats the oyſter at his eaſe.

'The apes along the banks of the river Gambia,' ſays Froger, 'are larger and more miſchievous than in any other part of Africa: The Negroes dread them, and cannot travel alone in the country, without running the hazard of being attacked by theſe animals, who often preſent them with a ſtick, and force them to fight. I have heard the Portugueſe ſay, that they have frequently ſeen them hoiſt up young girls, about ſeven or eight years old, into trees, and that they could not be wreſted from them without a great deal of difficulty. The moſt part of the Negroes imagine them to be a foreign nation come to inhabit their country, and that they do not ſpeak for fear of being compelled to work.'

'We might diſpenſe,' another traveller * remarks, 'with ſeeing a number of apes at Macacar; becauſe a rencounter with them is often fatal. It is neceſſary to be always well armed to defend ourſelves againſt their attacks. . . . .

* Deſcript. Hiſtorique du Royaume de Macacar, p. 51.

'They

'They have no tail, and walk always erect on 'their two hind feet, like men.'

Theſe are nearly all the facts, concerning this animal, which have been related by voyagers who are leaſt credulous, and deſerve moſt credit. I have quoted the paſſages entire, becauſe every article is important in the hiſtory of a brute which has ſo great a reſemblance to man. And, that we may be enabled to aſcertain the nature of this animal with the greater preciſion, we ſhall now mark the differences and conformities which make him approach or recede from the human ſpecies. He differs from man externally by the flatneſs of his noſe, by the ſhortneſs of his front, and by his chin, which is not elevated at the baſe. His ears are proportionally too large, his eyes too near each other, and the diſtance between his noſe and mouth is too great. Theſe are the only differences between the face of an orang-outang and that of a man. With regard to the body and members, the thighs are proportionally too ſhort, the arms too long, the fingers too ſmall, the palm of the hands too long and narrow, and the feet rather reſemble hands than the human foot. The male organs of generation differ not from thoſe of man, except that the prepuce has no *frænum*. The female organs are extremely ſimilar to thoſe of a woman.

The orang-outang differs internally from the human ſpecies in the number of ribs: Man has only twelve; but the orang-outang has thirteen.

The

The vertebræ of the neck are alſo ſhorter, the bones of the pelvis narrow, the buttocks flatter, and the orbits of the eyes ſunk deeper. He has no ſpinal proceſs on the firſt vertebra of the neck. The kidneys are rounder than thoſe of man, and the ureters have a different figure, as well as the bladder and gall-bladder, which are narrower and longer than in the human ſpecies. All the other parts of the body, head, and members, both external and internal, ſo perfectly reſemble thoſe of man, that we cannot make the compariſon without being aſtoniſhed that ſuch a ſimilarity in ſtructure and organization ſhould not produce the ſame effects. The tongue, and all the organs of ſpeech, for example, are the ſame as in man; and yet the orang-outang enjoys not the faculty of ſpeaking; the brain has the ſame figure and proportions; and yet he poſſeſſes not the power of thinking. Can there be a more evident proof than is exhibited in the orang-outang, that matter alone, though perfectly organized, can produce neither language nor thought, unleſs it be animated by a ſuperior principle? Man and the orang-outang are the only animals who have buttocks and calfs of the legs, and who, of courſe, are formed for walking erect; the only animals who have a broad cheſt, flat ſhoulders, and vertebræ of the ſame ſtructure; and the only animals whoſe brain, heart, lungs, liver, ſpleen, ſtomach, and inteſtines are perfectly ſi-

milar,

milar, and who have an appendix vermiformis or blind-gut. In fine, the orang-outang has a greater reſemblance to man than even to the baboons or monkeys, not only in all the parts we have mentioned, but in the largeneſs of the face, the figure of the cranium, of the jaws, of the teeth, and of the other bones of the head and face; in the thickneſs of the fingers and thumb, the figure of the nails, and the number of vertebræ; and, laſtly, in the conformity of the articulations, the magnitude and figure of the rotula, ſternum, &c. Hence, as there is a greater ſimilarity between this animal and man than between thoſe creatures which reſemble him moſt, as the Barbary ape, the baboon, and monkey, who have all been deſigned by the general name of *apes*, the Indians are to be excuſed for aſſociating him with the human ſpecies, under the denomination of *orang-outang*, or *wild man*. As ſome of the facts we have related may appear ſuſpicious to thoſe who never ſaw this animal, we ſhall ſupport them by the authority of two celebrated anatomiſts. Tyſon * and Couper diſſected him with

* The orang-outang has a greater reſemblance to man than to the apes or monkeys; becauſe, 1. The hairs on his ſhoulders are directed downward, and thoſe of the arms upward. 2. His face is broader and flatter than that of the apes. 3. The figure of his ear has a greater reſemblance to that of man, except the cartilaginous part, which is thin, as in the apes. 4. His fingers are proportionally thicker than thoſe of

with the moſt ſcrupulous exactneſs, and have given us the reſults of the compariſons they made

the apes. 5. He is in every article formed for walking erect, which is by no means the caſe with the apes and monkeys. 6. He has thicker buttocks than all the other apes. 7. He has calfs to his legs. 8. His breaſt and ſhoulders are broader than thoſe of the apes. 9. His heel is longer. 10. He has a cellular membrane, placed, as in man, under the ſkin. 11. His peritonæum is entire, and not pierced or lengthened, as it is in the apes. 12. His inteſtines are longer than thoſe of the apes. 13. The inteſtinal canal is of different diameters, as in man, and not equal or nearly equal, as in the apes. 14. His cæcum has a vermicular appendix, as in man; but this appendix is wanting in all the other apes: Beſides, the neck of the colon is not ſo long as that of the apes. 16. The inſertions of the biliary and pancreatic ducts have but one common orifice in man and the orang-outang; but, in the monkeys, theſe inſertions are two inches aſunder. 16. The colon is longer than that of the apes. 17. The liver is not divided into lobes, as in the apes, but entire, as in man. 18. The biliary veſſels are the ſame as in man. 19. The ſpleen, and, 20. the pancreas, are the ſame. 21. The number of lobes in the lungs is the ſame. 22. The pericardium is attached to the diaphragm, as in man. 23. The cone of the heart is blunter than in the apes. 24. He has no pouches at the bottom of the cheeks, as the other apes and monkeys have. 25. His brain is larger than that of the apes, and exactly formed like the human brain. 26. The cranium is rounder and double the ſize of that of the monkeys. 27. All the ſutures of the cranium are ſimilar to thoſe of man; and the bones called *oſſa triquetra Wormiana* are found in the lambdoid ſuture, which is not the caſe in the other apes or monkeys. 28. He has the *os cribriforme* and the *criſta galli*, which are wanting in the monkeys. 29. He has the *ſella equina* exactly as in man; but, in the apes and monkeys, this part is more elevated and prominent. 30. The proceſſus pteregoideus is the ſame as in man; but it is wanting in the apes and monkeys. 31. The temporal bones, and thoſe called *oſſa bregmatis*, are the ſame as in man; but, in the apes and monkeys, theſe

made between the different parts of his body with that of man. I have tranſlated this article from the

theſe bones are of a different form. 32. The os zygomaticus is ſmall; but it is large in the apes and monkeys. 33. The teeth, and particularly the dog-teeth and grinders, are more ſimilar to the human teeth than to thoſe of the apes. 34. The tranſverſe proceſſes of the vertebræ of the neck, and the ſixth and ſeventh vertebræ, have a greater reſemblance to thoſe of man than to thoſe of the apes and monkeys. 35. The vertebræ of the neck are not perforated, as in the apes, for the tranſmiſſion of nerves, but plain and entire, as in man. 36. The vertebræ of the back and their proceſſes are the ſame as in man; and, in the lower vertebræ, there are only two inferior proceſſes; but, in the apes, there are four. 37. As in man, there are only five lumbar vertebræ; but, in the monkeys, there are ſix or ſeven. 38. The ſpinal proceſſes of the lumbar vertebræ are ſtraight, as in man. 39. The *os ſacrum* is compoſed of five vertebræ, as in man; but, in the apes and monkeys, it conſiſts only of three. 40. The coccix is compoſed of four bones, as in man, and theſe bones are not perforated; but, in the apes and monkeys, the coccix is compoſed of a greater number of bones, which are all perforated. 41. In the orang-outang, there are only ſeven true ribs *(coſtæ veræ)*, and the extremities of the falſe ribs *(coſtæ nothæ)* are all cartilaginous, and articulated with the bodies of the vertebræ; but, in the apes and monkeys, there are eight true ribs, and the extremities of the falſe ribs are oſſeous, and their articulations are placed in the interſtices between the vertebræ. 42. The ſternum of the orang-outang is as broad as that of man, and not narrow, as in the monkeys. 43. The bones of the four fingers are thicker than thoſe of the apes. 44. The thigh bone is perfectly ſimilar to that of man. 45. The rotula is round, and not long, ſingle, and not double, as it is in the apes. 46. The heel, the *tarſus*, and *metatarſus*, are the ſame as thoſe of man. 47. The middle toe is not ſo long as in the apes. 48. The *obliquus inferior capitis*, *pyriformis*, and *biceps femoris* muſcles, are ſimilar to thoſe of man; but they are different in the apes and monkeys, &c.

the Engliſh, that the reader may be enabled to form a judgment of the almoſt entire reſemblance

The orang-outang differs from the human ſpecies more than from the apes and monkeys in the following articles. 1. The thumb is proportionally ſmaller than that of man; but it is larger than that of the other apes. 2. The palm of the hand is longer and narrower than in man. 3. He differs from man and approaches the apes by the length of his toes. 4. He differs from man by having the large toe of the foot removed nearly to the diſtance of an inch from the next one, and he ſhould be rather conſidered as a four-handed animal than a quadruped. 5. His thighs are ſhorter than thoſe of man; and, 6. his arms are longer. 7. The teſticles are not pendulous. 8. The epiploon is larger than in man. 9. The gall-bladder is longer and narrower. 10. The kidneys are rounder than in man; and the ureters are alſo different. 11. The bladder is longer. 12. He has no *frænum* to the prepuce. 13. The bone in the orbit of the eye is ſunk deeper. 14. He wants the two cavities below the *ſella turcica*. 15. The maſtoid and ſtyloid proceſſes are extremely ſmall. 16. The bones of the noſe are flat. 17. The *vertebræ* of the neck are ſhort, as in the apes, flat before and not round, and their ſpinal proceſſes are not forked, as in man. 18. He has no ſpinal proceſs in the firſt *vertebra* of the neck. 19. He has thirteen ribs on each ſide, and man has only twelve. 20. The *oſſa ilia* are perfectly ſimilar to thoſe of the apes, being longer, narrower, and leſs concave than in man. 21. The following muſcles are found in man, and are wanting in the orang-outang, *Occipitales*, *frontales*, *dilatatores alarum naſi*, *ſeu elevatores labii ſuperioris*, *interſpinales colli*, *glutæi minimi*, *extenſor digitorum pedis brevis*, *et tranſverſalis pedis*. 22. The muſcles which appear not in the orang-outang, and are ſometimes found in man, are thoſe called *pyramidales*, *caro muſculoſa quadrata*, the long tendon and fleſhy body of the *palmaris*, the *attollens* and *retrahens auriculam*. 23. The orang-outang, has the *elevator* muſcles of the clavicles like thoſe of the apes, and different from thoſe of man. 24. The following are the muſcles by which the orang-outang reſembles the apes, and

differs

blance between this animal and the human ſpecies. I ſhall only remark, for the better underſtanding of this note, that the Engliſh are not confined, like the French, to a ſingle name to denote *apes*. Like the Greeks, they have two denominations, the one for the apes without tails, which they call *apes* *, and the other for the apes with tails, which they call *monkeys*. The apes of Tyſon could be no other than thoſe which we denominate *pithecus* or *pigmy*, and the *cynocephalus* or Barbary ape. I ſhould likewiſe remark, that this author gives ſome reſemblances and differences which are not ſufficiently accurate.

1. Tyſon makes it peculiar to man and the orang-outang, to have the hair on the ſhoulders directed downward, and that of the arms upward. The hair of moſt animals, it is true, is directed backward or downward; but there are ſome exceptions. The ſloth and the leaſt ant-eater have the hair of their anterior parts directed backward, and that of the crupper and reins directed forward. Hence this character is of no

differs from man: *Longus colli, pectoralis, latiſſimus dorſi, glutæus maximus et medius, pſoas magnus et parvus, iliacus internus, et gaſtrocnemius internus.* 25. He differs from man in the figure of the *deltoides, pronator radii teres, et extenſor pollicis brevis.* Anatomy of the orang-outang by Tyſon.

* Simiæ dividuntur in cauda carentes, quæ ſimiæ ſimpliciter dicuntur; et caudatas, quæ cercopitheci appellantur; quæ prioris generis ſunt Anglice *apes* dicuntur; quæ poſterioris *monkeys*; *Raii Synopſ. Quad. p.* 149.

great moment in the compariſon of the orang-outang with man.

2. In the paſſage quoted from Tyſon, I took no notice of the four firſt differences; becauſe they are either too ſlight, or ill founded. The firſt is the difference of ſtature, which is an uncertain and gratuitous character, eſpecially as the author acknowledges that his animal was very young. The ſecond, third, and fourth are derived from the form of the noſe, the quantity of hair, and other minute relations. I retrenched ſeveral other differences; for example, the twenty-firſt, drawn from the number of teeth. It is certain that both the human ſpecies and this animal have an equal number of teeth. If the latter had only twenty-eight, as our author remarks, it was owing to his youth; and, it is well known, that man, when young, has not a greater number.

3. The ſeventh difference is alſo very equivocal: The teſticles of children are ſituated very high; and this animal, being young, ought not to have had them pendulous.

4. The forty-eighth mark of reſemblance, and the twenty-firſt, twenty-ſecond, twenty-third, twenty-fourth, and twenty-fifth marks of difference, are derived from the figure or preſence of certain muſcles, which, as they vary in moſt individuals of the human ſpecies, ought not to be regarded as eſſential characters.

5. All the reſemblances and differences drawn from

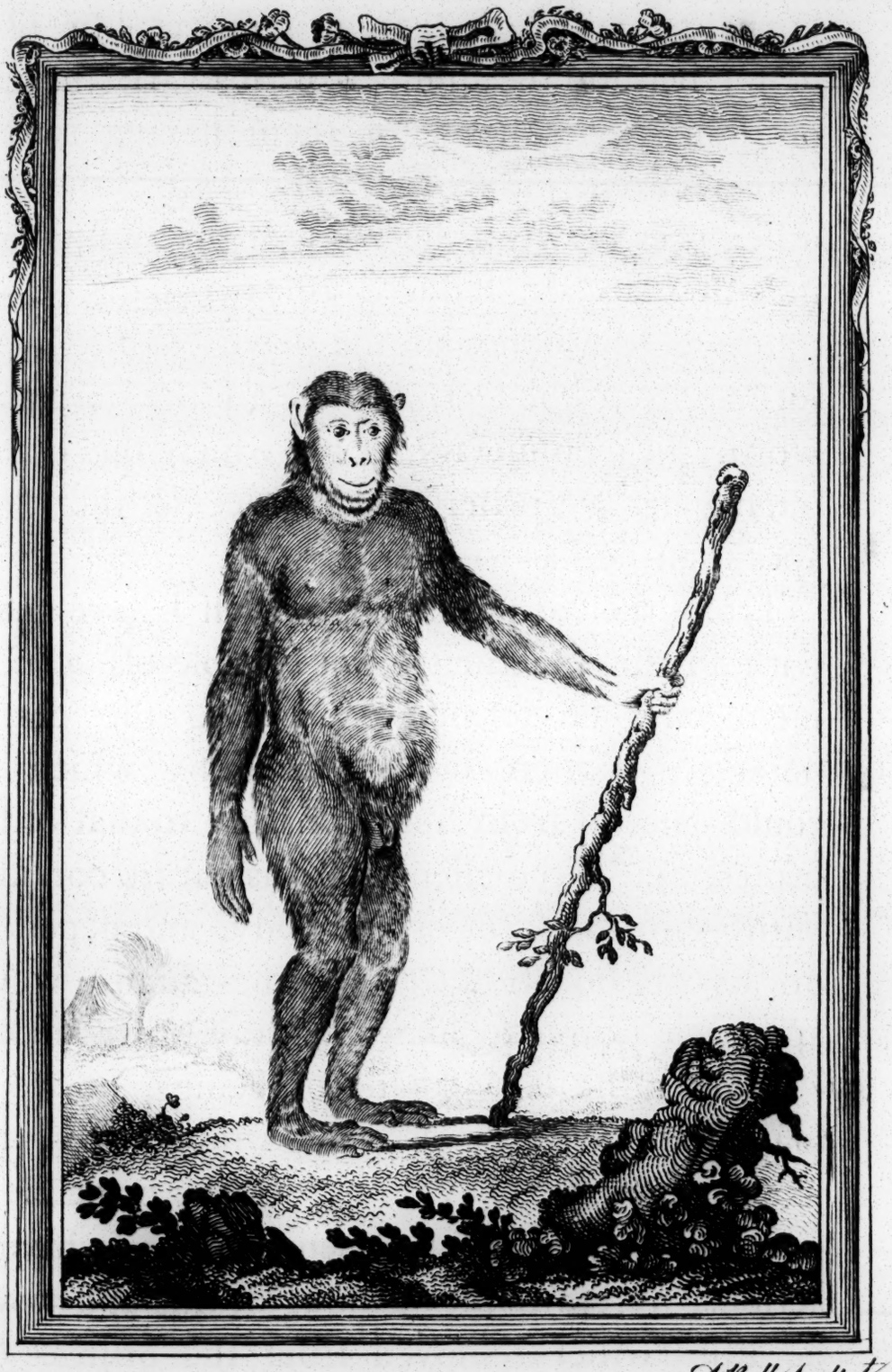
from parts too minute, as the proceſſes of the vertebræ, or derived from the poſition and magnitude of certain parts, ſhould only be conſidered as acceſſory characters; ſo that the whole detail of Tyſon's table may be reduced to the reſemblances and differences we have pointed out.

6. I ſhall mention ſome characters of a more general nature, ſome of which have been omitted by Tyſon, and others imperfectly related. 1. Of all the apes, baboons, and monkeys, the orang-outang alone wants thoſe pouches within the cheeks, into which they put their food, before they ſwallow it; for the inſide of his mouth is the ſame as in man. 2. The gibbon, the Barbary ape, all the baboons, and all the monkeys, except the douc, have flat buttocks, with calloſities on them. The orang-outang alone has plump buttocks without calloſities. The douc likewiſe has no calloſities; but his buttocks are flat and covered with hair; ſo that, in this reſpect, the douc forms the ſhade between the orang-outang and the monkeys. 3. The orang-outang alone has calfs of the legs and fleſhy buttocks. This ſingle character ſhows that he is beſt formed for walking erect; only his toes are very long, and his heel reſts with more difficulty on the ground than that of man. He runs with more eaſe than he walks; and, to enable him to walk eaſily and long, he would require artificial heels higher than thoſe of our

ſhoes. 4. Though the orang-outang has thirteen ribs, and man but twelve, this difference does not make him approach nearer to the baboons or monkeys than it removes him from man; becauſe the number of ribs varies in moſt of thoſe ſpecies, ſome of them having twelve, others eleven, others ten, &c. Hence the only differences between the body of this animal and that of man are reduced to two, namely, the figure of the bones of the pelvis, and the conformation of the feet. Theſe are the only parts worthy of conſideration, by which the orang-outang has a greater reſemblance to the other apes than he has to man.

From this examination, which I have made with all the exactneſs I was capable of, a judgment may be formed concerning the orang-outang. If there were a ſcale by which we could deſcend from human nature to that of the brutes, and if the eſſence of this nature conſiſted entirely in the form of the body, and depended on its organization, the orang-outang would approach nearer to man than any other animal. Placed in the ſecond rank of beings, he would make the other animals feel his ſuperiority, and oblige them to obey him. If the principle of imitation, by which he ſeems to mimic human actions, were a reſult of thought, this ape would be ſtill farther removed from the brutes, and have a greater affinity to man. But, as we formerly remarked, the interval which ſeparates them

Plate CCLVIII.



A Bell Sculpt

JOCKO.

B L

them is immenſe; and the reſemblance in figure and organization, and the movements of imitation which ſeem to reſult from theſe ſimilarities, neither make him approach the nature of man, nor elevate him above that of the brutes.

Diſtinctive Characters of this Species.

The orang-outang has no pouches within his cheeks, no tail, and no calloſities on his buttocks; which laſt are plump and fleſhy. All his teeth are ſimilar to thoſe of man. His face is flat, naked, and tawny. His ears, hands, feet, breaſt, and belly, are likewiſe naked. The hair of his head deſcends on both temples in the form of treſſes. He has hair on his back and loins, but in ſmall quantities. He is five or ſix feet high, and walks always erect on his two feet. We have not been able to aſcertain whether the females, like women, are ſubject to periodical courſes; but analogy renders this matter almoſt unqueſtionable.

THE PIGMY*.

ARISTOTLE remarks, 'that there are 'animals whoſe nature is ambiguous, and 'are partly allied to man, and partly to qua-'drupeds; ſuch as the *pigmies*, the *kebes*, and 'the *cynocephali*. The *kebe* is a pigmy with a 'tail; and the *cynocephalus* is perfectly ſimilar 'to the pigmy, except that it is larger and 'ſtronger, and has a longer muzzle, approach-'ing nearly to that of the bull-dog, from which 'circumſtance its name has been derived. Its 'manners are likewiſe more ferocious, and its

* Ape with a flattiſh face; ears like thoſe of a man; body of the ſize of a cat; colour above an olive brown, beneath yelloviſh; nails flat; buttocks naked; ſits upright; *Pennant's Synopſ. of Quad. p.* 98.

Πιθηκος in Greek; *Simia* in Latin; *Le Pitheque* in French; *Chinchin* in Tartary; and *Sinſin* in China.

Pithecus; *Ariſt. Hiſt. Anim. lib.* ii. *cap.* 8.

Simia; *Geſner, Quad. p.* 847. *Raii Synopſ. Quad. p.* 149. *Johnſton de Quad. tab.* 59.

Ape, 2d ſpec. *Boſman's Guiney, p.* 242.

Le Singe. Simia unguibus omnibus planis et rotundatis; *Briſſon. Quad. p.* 133.

Figura prima eſt earum ſimiarum quæ caudas non habent: Hæ cæteris facilius et citius manſuefiunt; cæteriſque ſolertiori ingenio præſtant, hilarioreſque et verſutiores exiſtunt; *Proſp. Alp. Hiſt. Egypt. lib.* iv. *tab.* 20. *fig.* 1.

Simia ſylvanus, ecaudata, natibus calvis, capite ſubrotundo; *Linn. Syſt. Nat. p.* 34.

'teeth

'teeth are ſtronger than thoſe of the pigmy, 'and have a greater reſemblance to thoſe of the 'dog.' From this paſſage, it is apparent, that neither the pigmy nor the *cynocephalus* mentioned by Ariſtotle have a tail; for he ſays, that the pigmies with tails are called *kebes*, and that the *cynocephalus* reſembles the pigmy in every article, except the muzzle and teeth. Hence Ariſtotle takes notice of two apes without tails, the pigmy and *cynocephalus*, and other apes with tails, to which he gives the denomination of *kebes*. Now, to compare our own knowledge with that of Ariſtotle, we ſhall remark, that we have ſeen three ſpecies of apes without tails, the orang-outang, the gibbon, or long armed ape, and the magot, or Barbary ape, and that the pigmy is none of theſe three ſpecies; for the orang-outang and gibbon could not be known to Ariſtotle, ſince theſe animals are only found in the ſouthern parts of Africa and India, which were not diſcovered in his time; beſides, they have characters very different from thoſe he aſcribes to the pigmy. But the third ſpecies, which we call the *magot*, or Barbary ape, is the *cynocephalus* of Ariſtotle; for it has no tail; its muzzle reſembles that of a bull-dog; and its canine teeth are long and thick. Beſides, this animal is common in Aſia Minor, and other eaſtern provinces which were known to the Greeks. The pigmy belongs to the ſame country; but we know it only from the relations of travellers.

lers. But, though we have never been able to procure this ape, its exiſtence is equally real with that of the *cynocephalus*. Geſner and Johnſton have given figures of the pigmy. M. Briſſon mentions his having ſeen it, and he diſtinguiſhes it from the *cynocephalus* or Barbary ape, which he likewiſe ſaw. He confirms Ariſtotle's remark, that theſe two animals reſemble each other in every thing, except that the *cynocephalus* has a longer muzzle than the pigmy *.

We remarked, that the orang-outang, the pigmy, the gibbon, and the Barbary ape, are the only animals to which the generic name *ape* ought to be applied; becauſe they alone want the tail, and walk ſpontaneouſly, and oftener on two feet than on four feet. The orang-outang and the gibbon are very different from the pigmy and Barbary ape. But, as the two latter have a perfect reſemblance, except in the length of the muzzle and the largeneſs of the canine teeth, the one has frequently been miſtaken for the other. They have always been mentioned under

* The firſt race of apes, which have no tail, and a ſhort muzzle: 1. The ape. I ſaw ſeveral apes which differed only in magnitude: Their face, ears, and nails, were very ſimilar to thoſe of man. The hair which covered their bodies, except the buttocks, which are naked, is a mixture of green and yellow. The green predominates on the ſuperior part of the body, and the yellow on the inferior. . . . . The ſecond race of apes, which have no tail, and a long muzzle: 1. The *cynocephalus* differs from the ape only in having a long muzzle, like that of a dog. I ſaw ſeveral of them which had no difference but in ſize; *Briſſon. Regn. Anim. p.* 189. 191.

the

the common appellation of *ape*, even in languages which have one name for apes without tails, and another for thoſe which have tails. In German, both the pigmy and Barbary ape are called *aff*, and *ape* in Engliſh. It is only in the Greek language that each of theſe animals has a proper name. *Cynocephalus* is rather an adjective than a proper ſubſtantive; and for that reaſon we have not adopted it.

From the teſtimony of the ancients, it appears, that the pigmy is more mild and docile than all the other apes with which they were acquainted, and that it was common in Aſia, as well as in Lybia, and other provinces of Africa which were frequented by the Greek and Roman travellers. Hence I preſume that the following paſſages of Leo Africanus and Marmol ought to be applied to the pigmy. They tell us, that the apes with long tails, which are ſhown in Mauritania, and which the Africans call *mones*, come from the Negro country; but that the apes without tails are natives, and very numerous in the mountains of Mauritania, Bugia, and Conſtantina: 'They have,' ſays Marmol, 'the feet, the 'hands, and the countenance of a man, and are 'extremely malicious and full of ſpirit. They 'live upon herbs, corn, and all kinds of fruits. 'They go in troops into the gardens or fields; 'but, before they leave the thickets, one of them 'aſcends an eminence, from which he views the 'country; and, when he ſees no perſon, he

'gives

'gives the ſignal, by a cry, for the reſt to pro-
'ceed, and removes not from his ſtation as long
'as they continue abroad. But, whenever he
'perceives any perſon approaching, he ſcreams
'with a loud voice; and, by leaping from tree
'to tree, they all fly to the mountains. Their
'flight is worthy of admiration; for the females,
'though they carry four or five young ones on
'their backs, make great ſprings from branch to
'branch. Though extremely cunning, vaſt
'numbers of them are taken by different arts.
'When wild, they bite deſperately; but by ca-
'reſſes they are eaſily tamed. They do much
'miſchief to the fruits and corn; for they ga-
'ther it together in heaps, cut it, and throw it
'on the ground, whether it be ripe or not, and
'deſtroy more than they eat or carry off. Thoſe
'who are tamed perform things which are al-
'moſt incredible, and imitate every human ac-
'tion*.' Kolbe relates nearly the ſame facts with regard to the apes of the Cape of Good Hope. But, from his figure and deſcription, it is obvious, that theſe apes are baboons, and have a ſhort tail, a long muzzle, pointed nails, &c.; and that they are much larger and ſtronger than the apes of Mauritania †. We may, therefore, preſume, that Kolbe has copied the paſſage from Marmol, and attributed to the baboons of the

* L'Afrique de Marmol, tom. i. p. 57.

† See below, art. *Baboon*.

Cape the manners and diſpoſitions of Mauritanian pigmies.

The pigmy, the Barbary ape, and the baboon, were known to the ancients; theſe animals are found in Aſia Minor, Arabia, Upper Egypt, and in all the northern parts of Africa. Hence this paſſage of Marmol may be applied to all the three. But it correſponds not with the baboon; for it mentions, that theſe apes have no tails. Neither is it the Barbary ape, but the pigmy, of which this author treats; for the Barbary ape is not eaſily tamed, and, inſtead of four or five, it generally produces only two young. But the pigmy, being ſmaller, ſhould produce a greater number. Beſides, it is milder and more docile than the Barbary ape, which is never perfectly tamed. For theſe reaſons, I am convinced that it is not the Barbary ape, but the pigmy, to which the paſſage in the above author ought to be applied. The ſame remark is applicable to a paſſage of Rubruquis; when mentioning the apes of Cathay, he ſays, 'That, in every article, 'they are faſhioned like man. . . . That they 'are more than a foot and a half high, and all 'covered with hair; that they live in caverns; 'that, in order to ſeize them, the natives put 'ſtrong inebriating liquors in the caverns they 'frequent; . . . that they aſſemble together to 'drink theſe liquors, crying *chinchin*, from which 'they have obtained the name of *chinchin*; and 'that, after intoxicating themſelves, they fall 'aſleep,

'asleep, when they are easily taken by the hun-'ters.' These characters correspond with the pigmy, and by no means with the Barbary ape. The latter we have seen alive, and never heard it cry *chinchin*. Besides, it is much more than a foot and a half high, and has not so great a resemblance to man as the author alledges. We have the same reasons for applying to the pigmy the figure and remark of Prosper Alpinus. He tells us, that the small apes without tails, which he saw in Egypt, tame sooner and more easily than any other; that they have likewise more sagacity and industry, and are gayer and more frolicsome. Now, the Barbary ape is thick, and of a considerable stature; it is a dirty, ferocious, melancholy animal, and is never fully tamed. Hence the characters given by Prosper Alpinus to his ape without a tail, apply not to the Barbary ape, and can belong to no other animal than the pigmy.

Distinctive Characters of this Species.

The pigmy has no tail, and his canine teeth are not proportionally larger than those of man. He has a flat face; his nails are likewise flat, and rounded like those of the human species. He walks on two feet, and is about a foot and a half in length. His disposition is mild, and he is easily tamed. The ancients alledge, that the female is subject to the menstrual discharge, and analogy permits us not to doubt the fact.

The

The GIBBON, or Long-armed APE*.

THE gibbon keeps himſelf always erect, even when he walks on four feet; becauſe his arms are as long as both his body and legs. We have ſeen him alive. He exceeds not three feet in height; but he was young, and in captivity. Hence we may preſume, that he had not acquired his full dimenſions, and that, in a natural ſtate, he might arrive at four feet. He has not the veſtige of a tail. But he is diſtin-

* Long-armed ape, with a flat ſwarthy face, ſurrounded with gray hairs; hair on the body black and rough; buttocks bare; nails on the hands flat, on the feet long; arms of a diſproportioned length, reaching quite to the ground when the animal is erect, its natural poſture; of a hideous deformity; *Pennant's Synopſ. of Quad. p.* 100.

Gibbon is the name under which M. Dupleix gave us this animal, which he brought from the Eaſt Indies. I firſt imagined this to be an Indian word. But I found, in a note upon Pliny by Delacamp, that Strabo had denoted the *cephus* by the words *keipon*, from which *guibon* or *gibbon* had probably been derived. The following is the paſſage of Pliny, with Dalechamp's note; 'Pompeii Magni primum ludi oſtenderunt ex 'Ethiopia quas vocant *cephos**, quarum pedes poſteriores pe- 'dibus humanis et cruribus, priores manibus fuere ſimiles: Hoc 'animal poſtea Roma non vidit.'

* *Cephos*; Strabo, lib. xv. κεπτον vocat, eſſeque tradit facie ſatyro ſimilem; *Dal. Plin. Hſt. Nat. lib.* vii. *cap.* 19. *Nota*, It appears that the *cebus* of the Greeks, and the *cephus* of Pliny, which ought to be pronounced *kebus* and *kephus*, may have originally come from *koph* or *kophin*, the Hebrew and Chaldean name of the ape.

guiſhed from the other apes by the prodigious length of his arms: When ſtanding erect on his hind feet, his hands touch the ground; and he can walk on his four feet without bending his body. Round the face there is a circle of white, which gives him a very extraordinary appearance. His eyes are large, but deep ſunk. His ears are naked. His face is flat, of a tawny colour, and pretty ſimilar to that of man. After the orang-outang and the pigmy, the gibbon would make the neareſt approach to the human figure, if he was not deformed by the exceſſive length of his arms; for, in a ſtate of nature, man would likewiſe have a ſtrange aſpect. The hair and the beard, if neglected, would form round his countenance a circle ſimilar to that which ſurrounds the face of the gibbon.

This ape appeared to be of a tranquil diſpoſition, and of gentle manners. His movements were neither too briſk nor precipitant. He received mildly what was given him to eat. He was fed with bread, fruits, almonds, &c. He was afraid of cold and moiſture, and did not live long in a foreign climate. He is a native of the Eaſt Indies, and particularly of Coromandel, Malacca, and the Molucca iſlands *. It appears

* Father le Comte tells us, that he ſaw in the Moluccas a kind of ape, which walked naturally on two feet, uſed its hands like a man, and had a face like that of a Hottentot. But the whole body was covered with a kind of gray wool.

It

pears that he is likewiſe found in more northern provinces, and that we ought to refer to the gibbon the ape of the kingdom of Gannaura, on the frontier of China, to which ſome travellers have given the name of *fefé* †.

The gibbon varies in ſize and colour. There are two in the royal cabinet, of which the ſecond, though an adult, is much ſmaller than the firſt, and is brown on all the parts where the other is black. But they ſo perfectly reſemble each other in every other article, that they unqueſtionably belong to the ſame ſpecies.

It had an exact reſemblance to an infant, and expreſſed its paſſions and appetites in the moſt perfect manner. He adds, that theſe apes are extremely gentle; that they ſhow great attachment to the people with whom they are acquainted, and embrace them with tranſport; that one of them, which he ſaw, was, at leaſt, four feet high, and was very dexterous and agile; *Mem. ſur la China, par Louis le Comte, p.* 510.

† In the kingdom of Gannaura, on the frontier of China, there is a very rare animal called *fefé*. It is nearly of the human figure. Its arms are very long; the body is black, and covered with hair; and it moves lightly and very quick; *Recueil des Voyages, &c. tom.* iii. *p.* 168. *Nota,* 1. This character of very long arms belongs only to the gibbon; and, conſequently, indicates that the fefé is the ſame animal. 2. We may preſume, that the word *fefé* comes from *jefef* or *ſeſef*, the name of the baboon in the provinces of Africa which border upon Arabia, and that it has been transferred from the baboon to the gibbon; for the arms of the baboon are not longer than thoſe of the other apes.

Diſtinctive Characters of this Species.

The gibbon has no tail. There are ſlight calloſities on his buttocks. His face is flat, brown, and ſurrounded with a circle of gray hairs. His canine teeth are proportionally larger than thoſe of man. The ears are naked, black, and round. The arms are enormouſly long. He walks on his two hind feet, and is about a foot and a half, or three feet high. The female, like women, is ſubject to a periodical evacuation.

Plate CCLIX.



A Bell sculpt

GREAT GIBBON.

BL

Plate CCLX.



A. Bell Sculpt.

SMALL GIBBON.

BL

The MAGOT, or BARBARY APE*.

OF all the apes without tails†, the magot agrees beſt with the temperature of our climate. We kept one ſeveral years. In ſummer, he delighted to be in the open air; and, in winter, he might be kept in a room without fire. Though by no means delicate, he was always melancholy, and ſometimes dirty. He uſed the ſame grimaces to mark his anger, or to expreſs his appetite. His movements were briſk, his manners groſs, and his aſpect more ugly than

* Barbary ape, with a long face, not unlike that of a dog; canine teeth long and ſtrong; ears like the human; nails flat; buttucks bare; colour of the upper part of the body a dirty greeniſh brown; belly of a dull pale yellow; grows to above the length of four feet; *Pennant's Synopſ. of Quad. p.* 100.

Magot, the old French name of this ape, which we have adopted. *Momenet*, according to Johnſton. It is likewiſe called *Tartarin*, becauſe it is very common in South Tartary.

Cynophalus; *Ariſt. Hiſt. Anim. lib.* ii. *cap.* viii. *Plinii, lib.* viii. *cap.* 54. *Geſner, Quad. p.* 859. *Proſper. Alpin. Egypt, vol.* ii. *p.* 241. *tab.* 16.

Simia cynocephala. . . . . Le ſinge cynocephale; *Briſſon. Quad.*

Simia inuus, ecaudata, natibus calvis, capite oblongo; *Linn. Syſt. Nat. p.* 35.

† It is certain that this ape has no tail, though there is a ſlight appearance of one, formed by a ſmall appendix of ſkin about half an inch long, and ſituated above the anus. But this appendix has no vertebrae, and is only a portion of ſkin, which adheres not more to the coccix than to the reſt of the ſkin.

ridiculous. When agitated with paſſion, he exhibited, and ground his teeth. He filled the pouches of his cheeks with the food which was given him, and generally eat every thing, except raw fleſh, cheeſe, and whatever had undergone a kind of fermentation. When about to ſleep, he loved to perch upon an iron or wooden bar. He was always chained; becauſe, though he had been long in a domeſtic ſtate, he was not civilized, and had no attachment to his maſters. He ſeems to have been ill educated; for I have ſeen others of the ſame ſpecies more intelligent, more obedient, more gay, and ſo docile as to learn to dance, to make geſticulations in cadence, and to allow themſelves peaceably to be clothed.

This ape, when erect upon his two hind legs, is generally two feet and a half, or three feet high; the female is ſmaller than the male. He walks more willingly on four than on two feet. When reſting, he commonly ſupports his body on two prominent calloſities, which are ſituated where the buttocks ought to be: The anus is placed higher. Hence his body is more inclined than that of a man, when ſitting. He differs from the pigmy or ape properly ſo called: 1. Becauſe his muzzle is thick and long, as in the dog; but the face of the pigmy is flat; 2. Becauſe he has very long canine teeth; 3. Becauſe his nails and fingers are neither ſo flat nor ſo round; and, 4. Becauſe he is larger, more

ſquat,

ſquat, and of a more ferocious and untractable diſpoſition.

There are ſome varieties in this ſpecies. We have ſeen magots of different ſizes, and with hair more or leſs deeply coloured, and more or leſs buſhy. It even appears, that the five animals deſcribed and drawn by Proſper Alpinus, under the denomination of *cynocephali* *, are all magots, which differ only in magnitude, and in ſome other characters too ſlight to conſtitute diſtinct ſpecies. It likewiſe appears that the ſpecies is pretty generally diffuſed over all the warm climates of the Old Continent, and that they are found in Tartary, Arabia, Æthiopia, Malabar, Barbary, Mauritania, and as far as the Cape of Good Hope ‡.

Diſtinctive

* Proſper. Alpin. Hiſt. Nat. Ægypt. lib. iv. tab. 15. fig. 1. et tab. 16, 17, 18, 19.

† The third ſpecies of Malabarian ape is aſh-coloured, and has no tail, or a very ſhort one. It is familiar, and eaſily apprehends what it is taught.—I received one in a preſent, and I once thought proper to beat it; but its cries brought about me ſuch a number of its neighbours in a wild ſtate, that, to prevent accidents, I reſtored it to liberty; *Voyage du P. Vincent Marié*, *p.* 405.

‡ It is probably this ſpecies of ape which Robert Lade mentions in the following terms: 'We traverſed a large mountain in 'the neighbourhood of the Cape of Good Hope, and amuſed 'ourſelves with hunting large apes, which are very numerous in 'that place.——I can neither deſcribe all the arts practiſed by 'theſe animals, nor the nimbleneſs and impudence with which 'they returned, after being purſued by us. Sometimes they al-'lowed us to approach ſo near them, that I was almoſt certain of 'ſeizing them. But, when I made the attempt, they ſprung at

ridiculous. When agitated with paſſion, he exhibited, and ground his teeth. He filled the pouches of his cheeks with the food which was given him, and generally eat every thing, except raw fleſh, cheeſe, and whatever had undergone a kind of fermentation. When about to ſleep, he loved to perch upon an iron or wooden bar. He was always chained; becauſe, though he had been long in a domeſtic ſtate, he was not civilized, and had no attachment to his maſters. He ſeems to have been ill educated; for I have ſeen others of the ſame ſpecies more intelligent, more obedient, more gay, and ſo docile as to learn to dance, to make geſticulations in cadence, and to allow themſelves peaceably to be clothed.

This ape, when erect upon his two hind legs, is generally two feet and a half, or three feet high; the female is ſmaller than the male. He walks more willingly on four than on two feet. When reſting, he commonly ſupports his body on two prominent calloſities, which are ſituated where the buttocks ought to be: The anus is placed higher. Hence his body is more inclined than that of a man, when ſitting. He differs from the pigmy or ape properly ſo called: 1. Becauſe his muzzle is thick and long, as in the dog; but the face of the pigmy is flat; 2. Becauſe he has very long canine teeth; 3. Becauſe his nails and fingers are neither ſo flat nor ſo round; and, 4. Becauſe he is larger, more

ſquat,

ſquat, and of a more ferocious and untractable diſpoſition.

There are ſome varieties in this ſpecies. We have ſeen magots of different ſizes, and with hair more or leſs deeply coloured, and more or leſs buſhy. It even appears, that the five animals deſcribed and drawn by Proſper Alpinus, under the denomination of *cynocephali* *, are all magots, which differ only in magnitude, and in ſome other characters too ſlight to conſtitute diſtinct ſpecies. It likewiſe appears that the ſpecies is pretty generally diffuſed over all the warm climates of the Old Continent, and that they are found in Tartary, Arabia, Æthiopia, Malabar, Barbary, Mauritania, and as far as the Cape of Good Hope ‡.

Diſtinctive

* Proſper. Alpin. Hiſt. Nat. Ægypt. lib. iv. tab. 15. fig. 1. et tab. 16, 17, 18, 19.

† The third ſpecies of Malabarian ape is aſh-coloured, and has no tail, or a very ſhort one. It is familiar, and eaſily apprehends what it is taught.—I received one in a preſent, and I once thought proper to beat it; but its cries brought about me ſuch a number of its neighbours in a wild ſtate, that, to prevent accidents, I reſtored it to liberty; *Voyage du P. Vincent Marie*, *p.* 405.

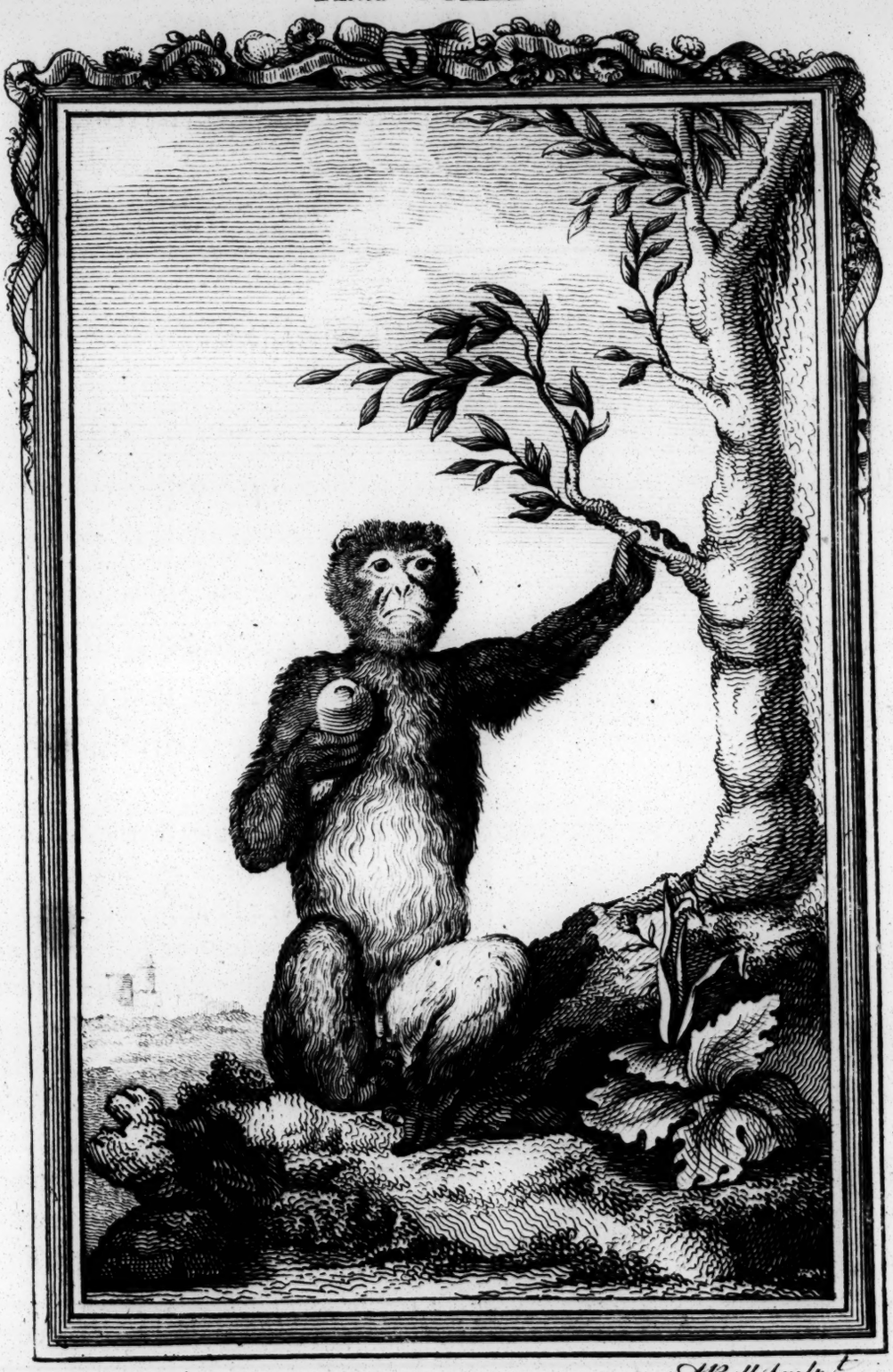
‡ It is probably this ſpecies of ape which Robert Lade mentions in the following terms: 'We traverſed a large mountain in 'the neighbourhood of the Cape of Good Hope, and amuſed 'ourſelves with hunting large apes, which are very numerous in 'that place.——I can neither deſcribe all the arts practiſed by 'theſe animals, nor the nimbleneſs and impudence with which 'they returned, after being purſued by us. Sometimes they al-'lowed us to approach ſo near them, that I was almoſt certain of 'ſeizing them. But, when I made the attempt, they ſprung, at

Diſtinctive Characters of this Species.

The magot has no tail, though there is a ſmall portion of ſkin which has the appearance of one. He has cheek-pouches, large prominent calloſities on his buttocks, canine teeth, proportionally longer than thoſe of man, and the under part of the face turned up, like the muzzle of a bull-dog. He has down on his face; the hair on his body is of a greeniſh brown colour, and that on his belly is a whitiſh yellow. He walks on the two hind feet, but oftener on four. He is three or three and a half feet high; and ſome of this ſpecies appear to be ſtill larger. The females are ſubject to a periodical diſcharge.

'a ſingle leap, ten paces from me, and mounted trees with equal 'agility, from which they looked at us with great indifference, 'and ſeemed to derive pleaſure from our aſtoniſhment. Some of 'them were ſo large, that, if our interpreter had not aſſured us 'that they were neither ferocious nor dangerous, our number 'would not have appeared to be ſufficient to protect us from their 'attacks. As it could ſerve no purpoſe to kill them, we did not 'uſe our guns. But the Captain happened to aim at a very large 'one which ſat on the top of a tree, after having fatigued us a 'long time in purſuing him: This kind of menace, however, of 'which the animal, perhaps, recollected his having ſometimes ſeen 'the conſequences, terrified him to ſuch a degree, that he fell 'down motionleſs at our feet, and we had no difficulty in ſeizing 'him. But, whenever he recovered from his ſtupor, it required 'all our dexterity and efforts to keep him. We tied his pats to-'gether. But he bit ſo furiouſly, that we were under the neceſ-'ſity of covering his head with our handkerchiefs;' *Voyages by Robert Lade.*

Plate CCLXI.



A. Bell Sculp.t

MAGOT.



B L

Plate CCLXXII.



A. Bell Sculpt.

BLACK BANDED PATAS.

BL

The BABOON, properly ſo called*.

IN man, the phyſiognomy is deceitful, and the figure of his body gives no indication of the qualities of his mind. But, in the brute creation, we may judge of the diſpoſition by the aſpect; for every internal quality appears externally. For example, in looking at the apes and baboons, it is eaſy to perceive, that the latter ought to be the moſt ſavage and miſchievous. Their manners differ as much as their figures. The orang-outang has the greateſt reſemblance to man; and he is the moſt grave, docile, and intelligent of the whole race. The Barbary ape, which begins to recede from the human figure, and approaches to that of the brutes by his muzzle and canine teeth, is briſk, diſobedient, and naſty. The baboons, who reſemble man in the hands only, and who have a tail, ſharp nails, a large muzzle, &c. have the air of ferocious beaſts, which they

* In Latin, *papio*; in Engliſh, *baboon*; in German, *pavyon*; at the Cape of Good Hope, *choac-kama*; in French, *le papion*, or *babouin*.

Papio; *Geſner. Icon. Quad. p.* 76. *Briſſon. Regn. Anim. p.* 192.

Simia ſphinx, ſemicaudata, ore vibriſſato, unguibus acuminatis, natibus calvis; *Linn. Syſt. Nat. p.* 35. *Nota*, Linnæus erred in making whiſkers a diſtinctive character of this animal; for the real baboon has no whiſkers. See our figure, which was drawn from the life.

really are. The baboon, of which a figure is here given, I ſaw alive. He was not perfectly hideous; and yet he excited a degree of horror. Perpetually grinding his teeth, fretting and chafing with rage, his owner was obliged to keep him confined in an iron cage, the bars of which he moved ſo powerfully with his hands, that he inſpired the ſpectators with terror. He is a ſquat animal, whoſe compact body and nervous members indicate ſtrength and agility. He is covered with long cloſe hair, which gives him the appearance of being larger than he is in reality. His ſtrength, however, is ſo great, that he would eaſily overcome one or ſeveral men, if not provided with arms*. Beſides, he is continually agitated by that paſſion which renders the gentleſt animals ferocious. He is inſolently ſalacious, affects to ſhow himſelf in this ſituation, and ſeems to gratify his deſires, *per manum ſuam*, before the whole world. This deteſtable action recalls the idea of vice, and renders diſguſtful the aſpect of an animal, which Nature ſeems to have particularly devoted to ſuch an uncommon ſpecies of impudence; for, in all

* It is to this ſpecies that the animal called *tré, tré, tré, tré*, at Madagaſcar, ought to be referred. It is as large, ſays Flacourt, as a calf of two years old. It has a round head, and the face of a man. The fore and hind feet are like thoſe of the ape. The hair is criſped, the tail ſhort, and the ears reſemble thoſe of man. It is ſimilar to the *tanach* deſcribed by Ambroſe Pary. It is a ſolitary animal, and much dreaded by the natives; *Voyage à Madagaſcar, p.* 151.

other

other animals, and even in man, ſhe has covered theſe parts with a veil. In the babcon, on the contrary, they are perpetually naked, and the more conſpicuous, becauſe the reſt of the body is covered with long hair. The buttocks are likewiſe naked, and of a blood red colour; the teſticles are pendulous; the anus is uncovered, and the tail always elevated. He ſeems to be proud of all thoſe nudities; for he preſents his hind parts more frequently than his front, eſpecially when he ſees women, before whom he diſplays an effrontery ſo matchleſs, that it can originate from nothing but the moſt inordinate deſire*. The magot, and ſome others, have the ſame inclinations; but, as they are ſmaller and not ſo petulant, they are taught modeſty by the whip. The baboon, however, is perfectly incorrigible, and nothing can tame him.

Notwithſtanding the violence of their paſſion, theſe animals produce not in temperate climates.

* Papio, animal ad libidinem pronum, cum mulieres videt alacritatem ſuam oſtendit.——Papio quem vidi vivum, ad nutum haud ſecus, atque caput reliqua animalia, anum vertebat frequentius populo oſtentans; *Geſner. Icon. Quad. p.* 77.——In the Philippine iſlands, the baboons are ſo ſalacious, that the women dare not go far from their own houſes; *Voyage de Gemelli Carreri, tom.* v. *p.* 209.—The baboons have no hair on their buttocks, which are ſo full of cicatrices and ſcratches, that they ſeem to be even deprived of ſkin. Theſe animals are inexpreſſibly laſcivious; *Deſcript. du Cap de Bonne-eſperance, par Kolbe, tom.* iii. *p.* 59.—'Papio, animal libidinoſum mulieribus facile vim infer ens, ro-'buſtum et ferox;' *Linn. Syſt. Nat. p.* 35.

The

The female generally brings forth but one young at a time, which ſhe carries between her arms, in a manner fixed to her pap. Like women, ſhe is ſubject to a periodical evacuation, which is common to her with the other female apes who have naked buttocks. Theſe baboons, though miſchievous and fierce, are not carnivorous. They live chiefly on fruits, roots, and ſeeds*. They aſſemble in troops for the purpoſe of robbing gardens: They throw the fruit from hand to hand, and over the walls; and they make great havock in all the cultivated lands.

Diſtinctive

* The baboons are paſſionately fond of raiſins, apples, and, in general, of all fruits which grow in gardens. . . . . Their teeth and paws render them formidable to dogs, who overcome them with difficulty, unleſs when exceſs of eating has made them heavy and inactive. —— I remarked that they neither eat fiſh nor fleſh, except when boiled or roaſted, and then they devour both with avidity.—In their expeditions to rob orchards, gardens, or vineyards, they generally go in troops. Some of them enter the incloſure, while others remain on the wall as ſentinels, to give notice of any approaching danger. The reſt of the troop are ſtationed without the garden, at convenient diſtances from each other, and thus form a line which extends from the place of pillage to that of their rendezvous. Matters being diſpoſed in this manner, the baboons begin the operation; and throw to thoſe on the wall, melons, goards, apples, pears, &c. Thoſe on the walls throw theſe fruits to their neighbours below; and thus the ſpoils are handed along the whole line, which generally terminates on ſome mountain. They are ſo dexterous, and quick-ſighted, that they ſeldom allow the fruit to fall in throwing it from one to another. All this is performed with profound ſilence and great diſpatch. When the ſentinels perceive any perſon, they cry; and,

Plate CCLXXIII.



A. Bell Sculp.

WHITE BANDED PATAS.

BL

Plate CCLXIV.



A. Bell Sculpt.

SMALL BABOON.

BL

Diſtinctive Characters of this Species.

The baboon has cheek-pouches and large calloſities on his buttocks, which are naked, and of a blood colour. His tail is arched, and about ſeven or eight inches long. The canine teeth are proportionally much longer and larger than thoſe of man. The muzzle is very thick and long; the ears are naked; the body is maſſy and contracted; the members are thick and ſhort; the organs of generation are naked and fleſh-coloured. The hair is long, buſhy, of a reddiſh brown, and pretty uniform over the whole body. He walks oftener on four than on two feet. When erect, he is three or four feet high. In this ſpecies, there ſeem to be races ſtill larger, and others much ſmaller. We have given figures both of the large and ſmall kinds, in which we can perceive no other difference than that of magnitude. This difference, however, proceeds not from age; for the ſmall baboon appeared to be an adult as well as the large. The females are ſubject to the menſtrual diſcharge*.

and, at this ſignal, the whole troop fly off with aſtoniſhing rapidity; *Deſcript. du Cap de Bonne-eſperance, par Kolbe, tom.* iii. *p.* 57.

* In Auguſt 1779, a male baboon, remarkable for its magnitude, ſtrength, and beautiful colours, was exhibited at Edinburgh. It was generally thought to be a variety of the mandrill deſcribed by Geſner, Buffon, Ray, Linnæus, and Briſſon. But, as it differed from the mandrill of theſe authors in a num-

a number of characters, the Tranſlator cauſed a drawing of it to be made. [See the plate.] The mandrill is ſaid not to exceed two feet in length. But this baboon, when erect, was near five feet high. The mandrill is repreſented as a good-natured, though not a ſportive, animal. This baboon, on the contrary, was exceſſively fierce, preſented uniformly to the ſpectators the moſt threatening aſpect, and attempted to ſeize every perſon who came within reach of his chain. On ſuch occaſions, he made a deep grunting noiſe, and toſſed up his head almoſt perpetually. The baboon deſcribed by Buffon 'preſented his hind parts more frequently than his front, 'eſpecially when he ſaw women.' But this baboon uniformly preſented his face, and allowed no perſon to approach him behind. The Count de Buffon remarks, that the mandrill is an animal of the moſt diſguſting deformity, and that he perpetually licks a ſnot which runs from his noſe. But the baboon under conſideration, was an animal of great beauty, and had no viſible diſtillation from his noſtrils.

Since writing the above, Mr. Pennant obligingly communicated to the Tranſlator the proof ſheets of a new and elegant edition of his excellent Synopſis of Quadrupeds, in which is contained the following accurate deſcription of this animal, under the appellation of the *Great Baboon*.

GREAT BABOON.

Papio; *Geſner. Quad. p.* 560. Simia ſphynx; *Linn. Syſt. Nat. p.* 35, Le Choras. Simia mormon; *Alſtroemar Schreber. p.* 92. *tab.* 8. Mus. Lev.

'Baboon with hazel irides; ears ſmall and naked; face ca-'nine, and very thick; middle of the face and forehead naked, 'and of a bright vermilion colour; tip of the noſe of the 'ſame; it ended truncated like that of a hog: Sides of the 'noſe broadly ribbed, and of a fine violet blue; the opening 'of the mouth ſmall; cheeks, throat, and goat-like beard, 'yellow: Hair on the forehead is very long, turns back, is 'black, and forms a kind of pointed creſt. Head, arms, and 'legs, covered with ſhort hair, yellow and black intermixed; 'the breaſt with long, whitiſh, yellow hairs; the ſhoulders with 'long brown hair.

'Nails flat; feet and hands black: Tail four inches long, 'and very hairy: Buttocks bare, red, and filthy; but the ſpace 'about them is of a moſt elegant purple colour, which reaches 'to the inſide of the upper part of the thighs.

'This was deſcribed from a ſtuffed ſpecimen in Sir Aſhton 'Lever's muſeum. In October 1779, a live animal of this 'ſpecies was ſhown at Cheſter, which differed a little in co-'lour from the above, being in general much darker. Eyes 'much ſunk in the head, and ſmall. On the internal ſide of 'each ear was a white line, pointing upwards. The hair on 'the forehead turned up, like a toupée. Feet black; in other 'reſpects reſembled the former.

'In this I had an opportunity of examining the teeth. The 'cutting teeth were like thoſe of the reſt of the genus; but, 'in the upper and lower jaw, were two canine, or rather tuſks, 'near three inches long, and exceedingly ſharp and pointed.

'This animal was five feet high, of a moſt tremendous 'ſtrength in all its parts; was exceſſively fierce, libidinous, and 'ſtrong.

'Mr. Schreber ſays, that this ſpecies lives on ſucculent 'fruits, and on nuts; is very fond of eggs, and will put eight 'at once into its pouches, and, taking them out one by one, 'break them at the end, and ſwallow the yolk and white: Re-'jects all fleſh-meat, unleſs it be dreſſed: Would drink quan-'tities of wine or brandy: Was leſs agile than other baboons: 'Very cleanly; for it would immediately fling its excrements 'out of its hut.

'That which was ſhown at Cheſter was particularly fond 'of cheeſe. Its voice was a kind of roar, not unlike that of 'a lion, but low and ſomewhat inward. It went upon all 'fours, and never ſtood on its hind legs, unleſs forced by the 'keeper; but would frequently ſit on its rump in a crouching 'manner, and drop its arms before the belly.

'Inhabits the hotter parts of Africa;' *Pennant's Synopſ. of Quad. edit. 2. in 4to. p.* 173.

To this deſcription very little can be added. In the indi-vidual ſhown at Edinburgh, which was probably the ſame that Mr. Pennant afterwards ſaw at Cheſter, the colours of the face were diſtinct and unmixed. The ribbed cheeks were of a ſky-blue colour. A vermilion line began a little above the eyes, and running down between them, and on each ſide of the

the noſe, ſpread over the ſnout. The inſide of the ears was blue, which, ſoftening from purple, terminated in vermilion. The beard, at the roots, was of the ſame dark brown colour with that on the upper part of the body; but it ſoon changed into a deep orange, and ended in yellow. The hairs on the belly were of an aſh-colour, and ſpeckled like the ſides of a partridge. The rump was of a vermilion colour; and the beautiful colours on the hips were only gradations from red to blue. If it had any calloſities on the buttocks, they were not apparent. The penis was nearly of the ſame red colour with the rump; that of the teſticles was more fiery, and ſoftened into a light blue, which likewiſe ſpread over the inſide of the thighs.——It was very fond of the ears of wheat, the grains of which it dexterouſly picked out, one by one, with its teeth.

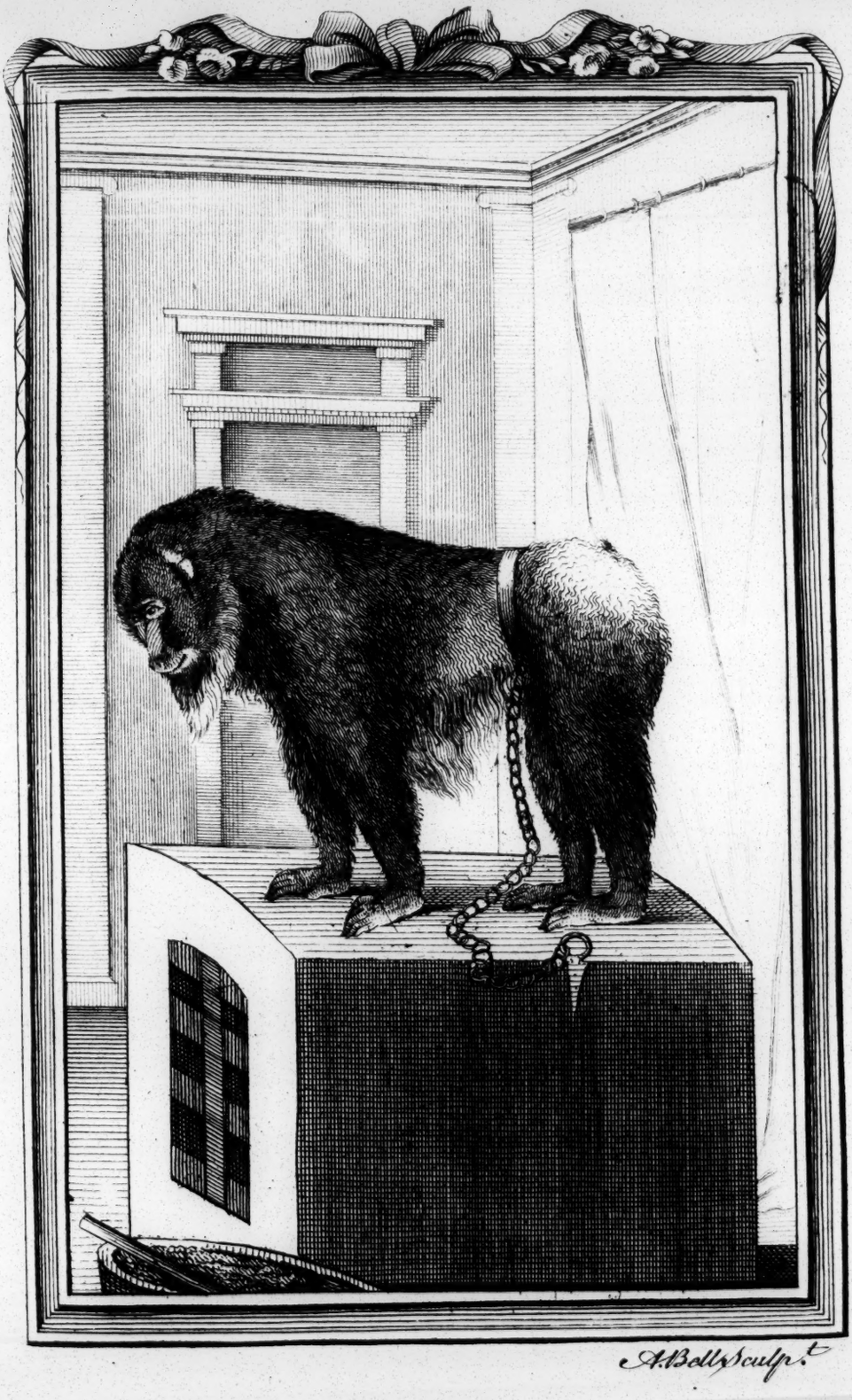
Plate CCLXV.



A. Bell Sculp.t

MANDRILL.

Plate CCLXVI.



A. Bell Sculpt.

MANDRILL.

B L

The MANDRILL*, or Ribbed-Noſe BABOON.

THE uglineſs of this baboon is perfectly diſguſting. His noſe, or rather his two noſtrils, are flat, from which a ſnot perpetually runs, and he licks it into his mouth with his tongue. His head is very large, and his muzzle long. His body is ſquat, and his buttocks are of a blood colour. His anus is conſpicuous, and ſituated almoſt as high as the loins. His face is of a violet colour, and ſurrounded on each ſide with deep longitudinal wrinkles, which

* Ribbed-noſe baboon, with a long naked noſe compreſſed ſidewiſe, of a purple colour, and ribbed obliquely on each ſide; on the chin, a ſhort picked orange beard; tail very hairy, about two inches long, which it carries erect; buttocks naked; hair ſoft, duſky mottled with yellow; length, from noſe to tail, about two feet; *Pennant's Synopſ. of Quad. p.* 103.

Simia maimon, caudata, ſubbarbata, genis cæruleis ſtriatis, natibus calvis; *Linn. Syſt. Nat. p.* 35.

Cercopithecus cynocephalus, parte corporis anteriore longis pilis obſita, naſo violaceo nudo; *Briſſon. Regn. Anim. p.* 214.

Mandrill, the name which the Britiſh, who frequent the coaſt of Guiney, have given to this animal.

There is a ſtrange ſort of animal, called by the white men in Guiney, a *mandrill*; but why it is ſo called, I know not, nor did I ever hear of the name before; neither can thoſe who call them ſo tell, except it be for its near reſemblance of a human creature, though nothing at all like an ape; *Smith's Voyage to Guiney, p.* 52.

augment the ſullenneſs and deformity of his aſpect. He is likewiſe larger, and perhaps ſtronger, than the baboon; but, at the ſame time, he is more peaceable, and leſs ferocious. We here give figures of both the male and the female, which we have ſeen alive. Whether they had received a better education, or if they be naturally more gentle than the baboon, they appeared to be more tractable and leſs impudent; but they were equally diſagreeable.

This ſpecies of baboon is found on the Gold Coaſt, and in the other ſouthern provinces of Africa, where he is called *boggo* by the Negroes, and *mandrill* by the Europeans. Next to the orang-outang, he is the largeſt of all the apes or baboons. Smith relates *, that he had a preſent

* The body of the mandrill, when full grown, is as big in circumference as a middle-fized man's. His legs are much ſhorter, and his feet longer, his arms and hands in proportion. The head is monſtrouſly big, and the face broad and flat, without any other hair but the eye-brows; the noſe very ſmall, the mouth wide and the lips thin. The face, which is covered with a white ſkin, is extremely ugly, being all over wrinkled as with old age; the teeth broad and very yellow; the hands have no more hair than the face, but the ſame white ſkin, though all the reſt of the body is covered with long black hair like a bear. They never go upon all four like apes, but cry when vexed or teazed, juſt like children. It is ſaid, that the males often attack and uſe violence to the black women, wherever they meet them alone in the woods. They are generally very ſnotty-noſed, and take great delight in ſcraping it down from their noſes to their mouths. When I was at Skerbro, one Mr. Cummerbus made me a preſent of one of theſe ſtrange animals, which are called by the natives *boggoe*. It was a ſhe-cub of ſix months age, but was then larger than a baboon;

ſent of a female mandrill, which was only ſix months old, and that it was as large as an adult baboon. He adds, that theſe mandrills walk always on two feet; that they weep and groan like men; that they have a violent paſſion for women, which they never fail to gratify when they find a woman at a diſtance from relief.

Diſtinctive Characters of this Species.

The mandrill has cheek-pouches, and calloſities on the buttocks. The tail exceeds not two or three inches. The canine teeth are much thicker and longer than thoſe of man. The muzzle is very thick, very long, and furrowed on each ſide with deep longitudinal wrinkles. The face is naked, and of a blueiſh colour. The ears, as well as the palm of the hands and ſoles of the feet, are naked. The hair is long,

Smith's Voyage to Guiney, p. 51. In the ſame country, this animal is called *boogoc* or *boggo*, and *mandrill*, and they likewiſe call the orang-outang, *pongo* and *drill*. There is much ſimilarity in theſe names, and they are probably derived from each other: And, in fact, the pongo and boggo, or the drill and mandrill, have ſeveral common characters. But the firſt is an ape without a tail, almoſt naked, and with a flat oval face; and the ſecond is a baboon with a tail, long hair, and a thick and long muzzle. *Man*, in the German and Engliſh languages, ſignifies *man* in general; and *drill*, in the jargon of ſome of our French provinces, denotes a *vigorous libertine*.

of a reddiſh brown upon the body, and gray upon the breaſt and belly. He walks on two feet oftener than on four. When erect, he is four or four and a half feet high; and ſome of them ſeem to be ſtill larger. The females are ſubject to the *menſes*.

Plate CCLXVII.



A. Bell Sculp.t

FEMALE MANDRILL.

B L

The OUANDEROU* and the LOWANDO†.

THOUGH theſe two animals appear to belong to the ſame ſpecies, we have preſerved to each of them the proper names they receive in Ceylon, which is their native country; becauſe they conſtitute, at leaſt, two diſtinct and permanent races. The body of the ouanderou is covered with brown and black hairs; it has a buſhy head, and a large beard. The body of the lowando, on the contrary, is covered with whitiſh hairs, and the hair on its head and beard is black. In the ſame country, there is a third race or variety, which

* *Ouanderou*, *wanderu*, the names of this animal in Ceylon.

Simia ex Egypto Venetias deducta; *Proſp. Alpin. vol.* ii. *p.* 245. *tab.* 20.

Ouanderou, a kind of ape in Ceylon, of which there appear to be two ſpecies; *Relation de Ceylon, par Knox, tom.* i. *p.* 105. 111. *fig. ibid.*

Cercopithecus niger, barba incana promiſſa, *Wanderu* Zeylonenſibus; *Raii Synopſ. Quad. p.* 158.

Cercopithecus barbatus niger, barba incana; *Briſſon, Regn. Anim. p.* 207.

† *Lowando*, *el-wandu*, the names of this animal in Ceylon. *Nota*, 1. It appears to be only a variety of the ouanderou. 2. There ſeems to be another variety of theſe animals; the ouanderou with a black body and white beard, and the lowando with a gray body and black beard. Others of the ſame ſpecies are totally white.

is probably the common ſtock of the other two; for the hair on its body, head, and beard, is of one uniform white colour. Theſe three animals are not apes, but baboons, of which they have all the characters both in figure and diſpoſitions. They are wild, and even ferocious. Their muzzle is long, their tail ſhort, and they are nearly of the ſame ſize and ſtrength as the baboons. Their bodies are indeed leſs ſquat, and their hind-parts ſeem to be more feeble. That of which we have given a figure, was exhibited to us under falſe appellations, both with regard to its name and climate. Its owners told us, that it came from the continent of America, and that it was called *cayouvaſſou*. I ſoon recollected that this word *cayouvaſſou* is a Braſilian term, which is pronounced *ſajououaſſou*, and ſignifies *ſapajou*; and, conſequently, that it was improperly applied; ſince all the ſapajous have very long tails. But the animal under conſideration is a baboon with a very ſhort tail. Beſides, not a ſingle ſpecies of baboon exiſts in America. Errors with regard to climate are very common, eſpecially among thoſe who exhibit wild beaſts: When they are ignorant of the climate and the name of an animal, they fail not to give it a foreign denomination, which, whether true or falſe, equally ſerves their purpoſe.

Theſe baboon-ouanderous, when not tamed, are ſo miſchievous, that they muſt be kept in iron cages, where they are frequently agitated with

with vaſt fury. But, when taken young, they are eaſily tamed, and appear to be even more ſuſceptible of education that the other baboons. The Indians delight in inſtructing theſe animals, and pretend that the other apes, that is, the monkeys, have a great reſpect for the baboons, who are poſſeſſed of more gravity and intelligence. In a ſtate of liberty *, they are extremely wild, and keep perpetually in the woods †. If we may credit travellers, thoſe which are all white are the ſtrongeſt and moſt miſchievous. They are violently fond of women, ſtrong enough to raviſh them when found alone ‡, and often injure them ſo as to prove fatal.

Diſtinctive

* In Malabar, we find four ſpecies of apes: The firſt is all black and luſtrous, with a white beard, which ſurrounds its chin, and is more than a palm in length. The other apes have ſuch a reſpect for this ſpecies, that they humble themſelves in its preſence, as if they were conſcious of its ſuperiority. The princes and nobles eſteem theſe bearded apes; becauſe they appear to have more gravity and intelligence than the other kinds. They are educated for ceremonies and ſports, in which they acquit themſelves to the admiration of the ſpectators; *Voyage du Pere Vincent Marie, p.* 405.

† In Ceylon, there are monkeys as large as our ſpaniels. They have gray hair, a black viſage, and a white beard which extends from the one ear to the other. . . We meet with others of the ſame ſize, but of a different colour. This difference in colour appears not to alter the ſpecies; for they equally receive the denomination of *ouandereus*. They do little injury to the cultivated lands, and generally remain in the woods, where they live upon leaves and buds; but, when taken, they eat any thing; *Relation de Knox, tom.* i. *p.* 107, & 111.—*Hiſt. des Voyages, tom.* viii. *p.* 545.

‡ The white apes, which are ſometimes of the ſize of the largeſt bull-dogs, are more dangerous than the black. They have a great deſire for women, and, after committing many outrages on

Diſtinctive Characters of this Species.

The ouanderou has cheek-pouches, and calloſities on the buttocks. The tail is ſeven or eight inches in length. The canine teeth are longer and larger than thoſe of man. The muzzle is thick and long. The head is environed with a broad mane, and a large beard of coarſe hairs. The body is pretty long, and thin behind. In this ſpecies, there are races which vary in colour. Some have the hair on the body black, and a white beard; in others, the hair on the body is whitiſh, and the beard black. They walk more frequently on four than on two feet; and, when erect, they are three or three and a half feet high. The females are ſubject to the periodical evacuation.

them, terminate the ſcene by ſtrangling them. They ſometimes come to the very houſes; but the natives of Macacar, who are extremely jealous of their wives, take care to prevent the admiſſion of ſuch hideous gallants; *Deſcript. de Macacar, p.* 50.

Plate- CCLXIX.



A. Bell Sculp.t

OUANDEROU.

B L

The MAIMON, or Pig-tailed BABOON*.

THE apes, baboons, and monkeys, form three tribes, with intervals between each, the firſt of which is filled by the magot, and the ſecond by the maimon. The latter conſtitutes the link or ſhade between the baboons and monkeys, as the magot does between the apes and baboons. In effect, the maimon reſembles the baboons by the thickneſs and largeneſs of his muzzle, and by his ſhort arched tail; but he differs from them, and approaches the monkeys, by the ſmallneſs of his ſize, and the mildneſs of his nature. Mr. Edwards has given a figure and deſcription of the maimon, under the denomination of the *pig-tailed ape*. This peculiar cha-

* Pig-tailed baboon, with a pointed face; eyes hazel; above and beneath the mouth ſome few black hairs; face naked, of a ſwarthy redneſs; two ſharp canine teeth; ears like the human; crown of the head duſky; hair on the limbs and body brown, inclining to aſh-colour; paleſt on the belly; fingers black; nails long and flat; thumbs on the hind-feet very long, connected to the neareſt toe by a broad membrane; tail four inches long, exactly like a pig's, and almoſt naked; the bare ſpaces on the rump red, and but ſmall; length from head to tail twenty-two inches.

Pig-tailed monkey; *Edwards*, *p.* 8.

Simia Nemeſtrina, ſemicaudata, ſub-barbata, griſea, iridibus brunneis, natibus calvis; *Linn. Syſt. Nat. p.* 35. *Brit. Muſ.*

racter

racter is ſufficient to diſtinguiſh him; for, of all the baboons or monkeys, he alone has a naked, ſlender, and arched tail, like that of a pig. He is nearly of the ſize of the magot, and has ſo ſtrong a reſemblance to the macaque, or hare-lipped monkey, that he might be regarded as a variety of this ſpecies, if his tail were not totally different. He has a naked, tawny face, cheſnut-coloured eyes, black eye-lids, a flat noſe, and thin lips, with ſome ſtiff hairs, but too ſhort to form whiſkers. He has not, like the apes and baboons, his teſticles and penis prominent and apparent; the whole organs are concealed under the ſkin. Hence the maimon, though vivacious and full of fire, has none of that impudent petulance peculiar to the baboons. He is gentle, tractable, and even careſſing. He is found in Sumatra, and probably in other ſouthern provinces of India; of courſe he endures with difficulty the cold of our climate. The one we ſaw in Paris lived a ſhort time only, and that which Mr. Edwards deſcribed, exiſted only twelve months in London *.

* The pig-tailed monkey, from the iſland of Sumatra, in the Indian Sea, was brought to England in the year 1752. . . It was extremely lively and full of action. It was about the bigneſs of a common houſe-cat. It was a male . . . . . But, ſince I purchaſed this, which lived a year with me, I have ſeen a female of the ſame ſpecies ſhown in Bartholomew fair, London. It was larger by half than mine, which I carried to compare with it. They ſeemed highly pleaſed with each other's company, though it was the firſt time of their meeting; *Edwards's Gleanings, p.* 8.

Diſtinctive

Plate CCLXVIII.



A. Bell Sculpt.

MAIMON.

B L

Diſtinctive Characters of this Species.

The maimon has cheek-pouches, calloſities on the buttocks, and a naked, curled-up tail from five to ſix inches in length. The canine teeth are not proportionally longer than thoſe of man. The muzzle is very large; the orbits of the eyes are prominent above; the face, the ears, the hands, and the feet, are naked and fleſh-coloured. The hair on the body is of an olive black colour, and of a reddiſh yellow on the belly. He ſometimes walks on two, and ſometimes on four feet. When erect, he is two feet, or two feet and a half high. The female is ſubject to the menſtrual flux.

The MACAQUE or Hare-lipped MONKEY*, and the EGRET†.

OF all the *guenons*, or monkeys with long tails, the macaque makes the neareſt approach to the baboons. Like them, his body is ſhort

* Hare-lipped monkey, with the noſtrils divided like thoſe of a hare; noſe thick, flat and wrinkled; head large; eyes ſmall; teeth very white; body thick and clumſy; buttocks naked; tail long; colour varies, ſometimes like that of a wolf, but others are brown, tinged with yellow or olive. The tail is rather ſhorter than the body, and is always carried arched; *Pennant's Synopſ. of Quad. p.* 111.

Cercopithecus Angolenſis major, macaquo; *Marcgrave, Braſil. p.* 227. *Raii Synopſ. Quad. p.* 155. *Klein. Quad. p.* 89.

Cercopithecus cynocephalus, naribus bifidis elatis, natibus calvis; *Briſſon. Quad. p.* 152.

Simia cynomolgus, caudata, imberbis, naribus bifidis elatis, cauda arcuata, natibus calvis; *Linn. Syſt. Nat. p.* 38.

Simia Ægyptiaca, cauda elongata, clunibus tuberoſis nudis; *Haſſelquiſt.* Here the epithet *Ægyptiaca* is improperly applied; for Ægypt is not the native country of any ſpecies of monkeys. Etſi in Ægypto nullum ſimiarum genus naſcatur, cujuſlibet tamen generis et ex Arabia felici, et ex Æthiopia immenſæ mercaturæ cauſa illuc convehuntur; *Proſper. Alpin. Hiſt. Ægypt. lib.* iv. *p.* 240.

† The egret monkey, with a long face, and an upright ſharp pointed tuft on the top of the head; hair on the fore-head black; the tuft and upper part of the body light gray; eye-brows large; beard ſmall. It is of the ſize of a ſmall cat; *Pennant's Synopſ. of Quad. p.* 116.

Simia aygula, caudata, ſubimberbis, griſea, eminentia piloſa verticis reverſa longitudinali; *Linn. Syſt. Nat. p.* 39. *Oſbeck's Voyage, vol.* i. *p.* 151.

Cercopithecus

ſhort and ſquat, his head and muzzle large, his noſe flat, his cheeks wrinkled, and, at the ſame time, he exceeds moſt of the other monkeys in ſize. He is alſo extremely ugly; ſo that he might be regarded as a ſmall ſpecies of baboon, if his tail were not long and buſhy, while that of the baboon in general is very ſhort. This ſpecies is a native of Congo, and other ſouthern provinces of Africa. It is numerous, and ſubject to ſeveral varieties in ſize, in colour, and in the diſpoſition of the hair. The body of that deſcribed by Haſſelquiſt was more than two feet long; and thoſe we have ſeen exceed not a foot and a half. The one we have denominated *egret*, becauſe it has a creſt or tuft of hair on the top of the head, appears to be only a variety of the macaque, which it reſembles in every article, except this and ſome other ſlight differences in the hair. They are both of mild manners, and extremely tractable. But, independent of a diſagreeable muſky odour which they both diffuſe, they are ſo dirty, ſo ugly, and ſo loathſome, that, when they make their grimaces, they cannot be viewed without horror and diſguſt. Theſe monkeys go often in troops, eſpecially in their expeditions to rob gardens. Boſman relates, that they take in each paw a quantity of millet,

Cercopithecus Angolenſis, Macaquo. . . . . Caudam portat arcuatam. . . . Clamat *hah, hah*; dentes habet albiſſimos. . . . Penem habet humano ſimilem, inſtar pueri; *Marcgr. Hiſt. Nat. Braſil. p.* 227.

and

and an equal quantity under their arms and in their mouths; that they return thus loaded leaping on their hind feet, and, when purſued, they drop the ſtalks which they held under their arms and in their hands, preſerving only what they carry in their teeth, to enable them to run with more ſpeed on their four feet. He adds, that they examine, with the moſt ſcrupulous accuracy, every ſtalk of millet they pull, and, if it does not pleaſe them, they throw it on the ground, and tear up others. By this delicacy of choice, they do more damage than by their robberies *.

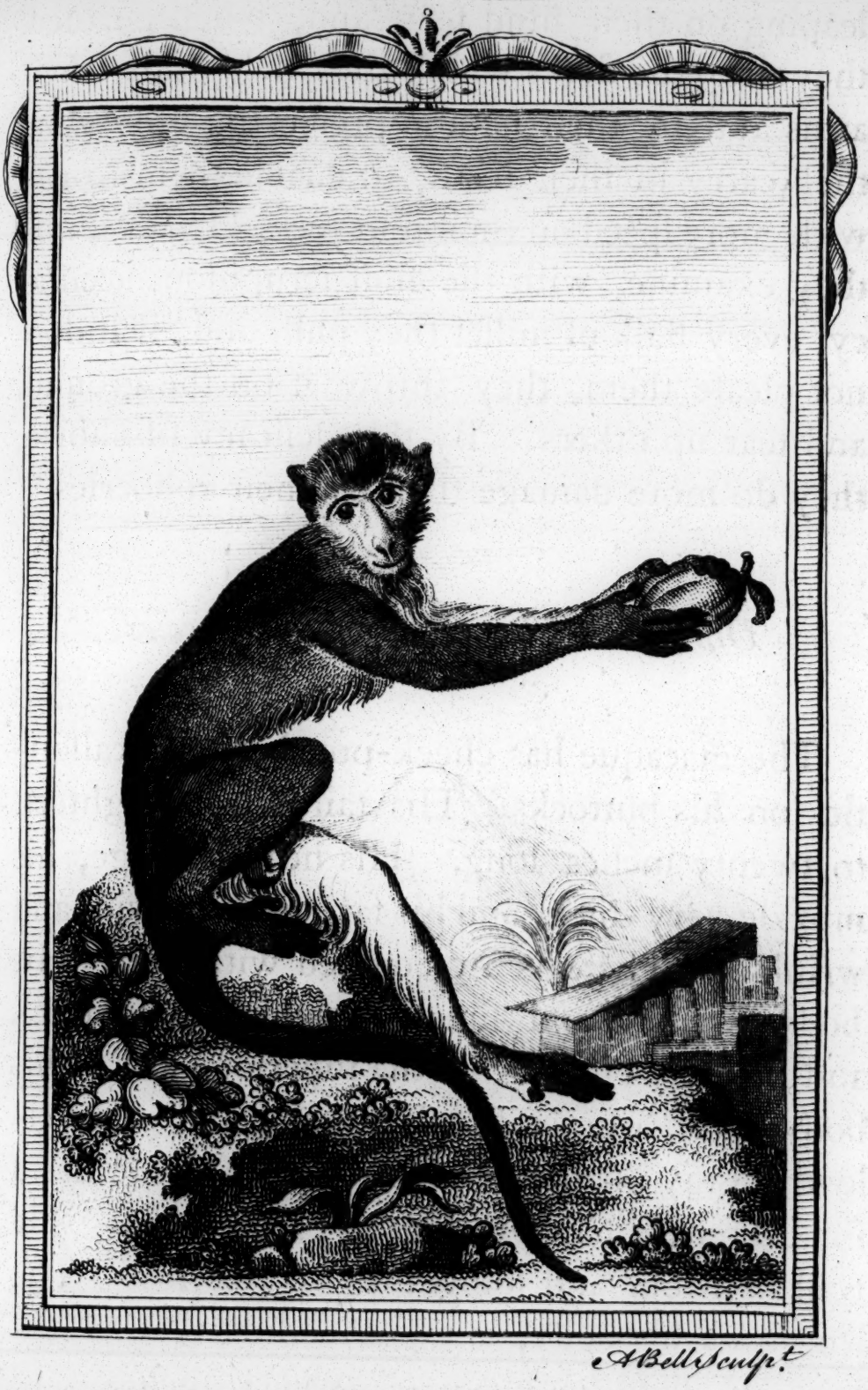
Diſtinctive Characters of this Species.

The macaque has cheek-pouches, and calloſities on his buttocks. His tail is from eighteen to twenty inches long. His head is large, his muzzle very thick, and his face naked, livid, and wrinkled. His ears are covered with hair. His body is ſhort and ſquat, and his limbs thick and ſhort. The hair on the ſuperior parts of his body is of a greeniſh aſh-colour, and of a yellowiſh gray on the breaſt and belly. He has a ſmall creſt of hair on the top of the head. He walks on four and ſometimes on two feet. The length of his body, comprehending that of the head, is about eighteen or twenty inches. In this ſpecies, there appear to be races much

* Voyage de Boſman, p. 258.

larger,

Plate CCLXX.



A Bell Sculpt.

MACAQUE.

B L

Plate CCLXXI.



A Bell Sculp.t

AIGRETTE.

BL

larger, and others much ſmaller, ſuch as that of the following.

The egret ſeems to be only a variety of the macaque: He is about one third leſs in all his dimenſions. Inſtead of a ſmall creſt of hair on the top of the head, as in the macaque, the egret has an erect, pointed tuft. The hair on his front is black; but that on the front of the macaque is greeniſh. The tail of the egret is likewiſe proportionally larger than that of the macaque. The females of both kinds have periodic evacuations.

The PATAS*, or red MONKEY.

THE patas belongs to the ſame country, and is nearly of the ſame ſize with the macaque; but his body is longer, his face leſs hideous, and his hair more beautiful. He is remarkable for the brilliancy of his robe, which is of ſo vivid a red as to have the appearance of being painted. We have ſeen two varieties of this ſpecies. The firſt has a black line above the eyes, which extends from ear to ear. The ſecond differs from the firſt only in the colour of this line, which is white. Both have long hair under the chin and round the cheeks, which makes a fine beard: But, in the firſt, it is yellow, and, in the ſecond, white. This variety ſeems to indicate others in the colour of the hair; and I am inclined to think, that the monkey

* The name of this monkey in Senegal, its native country. It is commonly called the *red ape of Senegal*.

Brue found in Tabao a new ſpecies of ape, of ſo lively a red colour, that a perſon would have imagined it to be painted. The Negroes call it *patas*; *Relat. de Brue, Hiſt. Gen. des Voyages, tom.* ii. *p.* 520.

Red monkey with a long noſe; eyes ſunk in the head; ears furniſhed with pretty long hairs; body ſlender: Over each eye, from ear to ear, extends a black line: The upper part of the body of a moſt beautiful and bright bay, almoſt red, ſo vivid as to appear painted; the lower parts aſh-colour, tinged with yellow. The tail is not ſo long as the body, the length of which is about one foot ſix inches; *Pennant's Synopſ. of Quad. p.* 116.

mentioned by Marmol *, which is of the colour of a wild cat, and ſaid to come from the Negro country, is a variety of the patas.

Theſe monkeys are not equally dexterous as the other kinds; and, at the ſame time, they are extremely inquiſitive. 'I have ſeen them,' ſays Brue, 'deſcend from the tops of the trees to the 'extremities of the branches, in order to admire 'the barks as they paſſed. They ſtare for ſome 'time, ſeem to be entertained with what they 'have ſeen, and then give place to thoſe who 'come after. They became ſo familiar as to 'throw branches at the Frenchmen, who re-'turned the compliment by the ſhot of their 'muſkets. Some of them fell, others were 'wounded, and the reſt were ſtruck with a 'ſtrange conſternation. One party raiſed hide-'ous cries; another collected ſtones to throw at 'the enemy: Some of them, with their bowels 'in their hands, attempted to throw their in-'trails at the ſpectators. At laſt, perceiving the 'combat to be at leaſt equal, they retired †.'

It is probably this ſpecies of monkey which le Maire ſpeaks of in the following terms: 'The havock which theſe monkeys make in the 'fields of Senegal, when the millet and other 'grains are ripe, is not to be expreſſed. They

* The apes of the colour of a wild cat, with a long tail, and a white or black muzzle, commonly called in Spain *Galos-paulés*, come from the Negro country; *L'Afrique de Marmol, tom.* i. *p.* 57.

† Relat. de Brue, Hiſt. Gen. des Voyages, tom. ii. p. 521.

'assemble to the number of forty or fifty. One 'of them stands sentinel on a tree, listens, and 'looks about on all sides, while the others are 'busy. When he perceives any person, he sets 'up loud shrieks to alarm the band, who obey 'the signal, fly off with their prey, leaping from 'tree to tree with prodigious agility. The fe-'males, who carry their young in their arms, fly 'with the rest, and leap as if they were loaded 'with no burden *.'

Though, in every region of Africa, the species of apes, baboons, and monkeys, are very numerous, some of which are pretty similar; yet it is remarked by travellers, that they never intermix, and that each species commonly inhabits a different quarter of the country †.

Distinctive Characters of this Species.

The patas has cheek-pouches and callosities on his buttocks. His tail is as long as both his body and head. The top of his head is flat. His muzzle, body, and legs, are long. He has black hair on his nose, and a narrow band of the same colour above his eyes, which extends from ear to ear. The hair on the upper parts of his

* Voyage de le Maire, p. 103.

† It would be endless to describe all the species of apes which are found from Arquin to Sierra-Leona. It is remarkable, that they do not intermix, and that two kinds are never seen in the same quarter; *Hist. Gen. des Voyages, tom.* ii. *p.* 221.

body

Plate CCLXXII.



A. Bell Sculp.

BLACK BANDED PATAS.

B L

Plate CCLXXIII.



A. Bell Sculp.

WHITE BANDED PATAS.

body is almoſt red, and that on the under parts, as the throat, breaſt, and belly, is of a yellow gray colour. This ſpecies varies in the colour of the band above the eyes. It is black in ſome, and white in others. They walk oftener on four than on two feet. When enraged, they agitate not their jaws, like the other monkeys. From the point of the muzzle to the origin of the tail, they are about a foot and a half or two feet in length. Some of them, as appears from the relations of travellers, are larger. The females menſtruate.

The MALBROUCK*, and CHINESE-BONNET†.

THESE two monkeys ſeem to be of the ſame ſpecies, which, though different in ſome reſpects from that of the macaque, makes ſo near an approach to it, that we are doubtful whether the macaque, the egret, the malbrouck, and the Chineſe-bonnet, are four varieties only, or permanent races, of the ſame ſpecies. As theſe animals produce not in our climate, we cannot aſcertain the identity or diverſity of their ſpecies, but muſt judge from the differences in their figure and external qualities. The macaque and the egret are ſo ſimilar, that we preſumed them to be one ſpecies. It is the ſame with the malbrouck and Chineſe-bonnet. But, as the latter differ from the former more than they differ between themſelves, we thought it beſt to ſeparate them.

Our preſumption, with regard to the diverſity of theſe two ſpecies, is founded, 1. On the dif-

* The name of this animal in Bengal, its native country.

Cercopithecus primus Cluſii, p. 37. Cluſius is wrong when he ſays, that this monkey's tail terminates in a tuft.

† Chineſe monkey with a long ſmooth noſe, of a whitiſh colour; hair on the crown of the head long, lying flat, and parted like that of a man; colour, a pale cinereous brown; *Pennant's Synopſ. of Quad. p.* 117.

Rillow; Knox's Ceylon, p. 26.

ference in their figure; 2. On thoſe of the colour and diſpoſition of the hair; 3. On the different proportions in the ſkeletons of the two kinds; and, in fine, on the two former being natives of the ſouthern regions of Africa, while the two latter are natives of Bengal. This laſt conſideration is of equal weight with any of the others; for we have ſhown, that, in wild animals totally independent of man, the diſtance of climate is a pretty certain indication of remoteneſs of ſpecies. Beſides, the malbrouck and Chineſe-bonnet are not the only ſpecies or races of monkeys found in Bengal *. It appears, from the evidence of travellers, that there are four varieties; namely, white, black, red, and gray monkeys. They alledge that the black kind are moſt eaſily tamed. Thoſe we ſaw were of a reddiſh gray colour, and appeared to be tame, and even docile.

'Theſe animals,' travellers remark †, 'ſteal 'fruits, and particularly the ſugar cane. One 'ſtands ſentinel on a tree, while the others load 'themſelves with the booty. If he perceives 'any perſon, he cries *houp*, *houp*, *houp*, with a

* The monkey of Calicut, with grayiſh hair, mentioned by Pyrard, ſhould probably be referred to the malbrouck ſpecies. In this country, the killing of monkeys is prohibited. They are ſo importunate, troubleſome, and numerous, that they do much damage. The inhabitants of the towns and villages are obliged to lattice their windows, to prevent the monkeys from entering their houſes; *Voyages de Fr. Pyrard, tom.* i. *p.* 427.

† Voyages d'Inigo de Biervillas, p. 172.

'loud and diſtinct voice. The moment this 'ſignal is given, the whole troop throw down 'the canes they held in their left hand, and run 'off on three feet. When purſued hard, they 'quit what they had in their right hand, and 'ſave themſelves by climbing trees, which are 'the uſual places of their abode. They leap 'from tree to tree; and even the females, 'though loaded with their young, which they 'hold firmly, leap like the others; but they 'ſometimes fall. Theſe animals are never more 'than half-tamed, and always require a chain. 'Even in their own country, they never pro-'duce, when in bondage: They require to be 'at perfect freedom in the woods. When fruits 'and ſucculent plants fail, they eat inſects, and 'ſometimes deſcend to the margins of rivers, 'and the ſea-coaſt, to catch fiſhes and crabs. 'They put their tail between the pincers of 'the crab, and, whenever the pincers are cloſed, 'they carry it quickly off, and eat it at their 'leiſure. They gather cocoa nuts, and are well 'acquainted with the method of extracting the 'juice for drink, and the kernel for food. They 'likewiſe drink the *zari* that drops from the '*bamboos*, which they place on the tops of trees, 'in order to extract the liquors; and they uſe 'it occaſionally. They are taken by means of 'a cocoa nut, with a ſmall hole made in it. 'They put their paw into the hole with difficul-

'ty,

'ty, becauſe it is narrow; and the people who 'are watching, ſeize them before they can diſ-'engage themſelves. In the provinces of India 'inhabited by the Bramins, who kill no ani-'mals, the number of monkeys, which are high-'ly venerated, is almoſt infinite. They come 'in troops into the cities, and enter the houſes 'at all times with perfect freedom; ſo that thoſe 'who ſell proviſions, and particularly fruits, 'pot-herbs, &c. have much difficulty in prefer-'ving their commodities.' In Amadabad, the capital of Guzarat, there are three hoſpitals for animals, where lame and ſick monkeys, and even thoſe who, without being diſeaſed, chooſe to dwell there, are fed and cheriſhed. Twice every week, the monkeys in the neighbourhood aſ-ſemble ſpontaneouſly in the ſtreets of the city. They then mount upon the houſes, each of which has a ſmall terrace, or a flat roof, where they lie during the great heats. On theſe two days, the inhabitants fail not to lay upon theſe terraces rice, millet, ſugar canes, and other fruits in their ſeaſon; for, if theſe animals, by any accident, find not their proviſions in the accuſtomed place, they break the tiles which cover the reſt of the houſe, and commit great outrages. They never eat any thing, without thoroughly examining it; and, when full, they fill their cheek-pouches for another occaſion. In places frequented by the monkeys, the birds dare not build their neſts on

the trees; for they never fail to deſtroy the neſts, and daſh the eggs on the ground *.

Neither the tiger nor other ferocious animals are the moſt formidable enemies to the monkeys; for they eaſily make their eſcape by their nimbleneſs, and by living on the tops of trees, where nothing but ſerpents have the art of ſurpriſing them. 'The apes,' a traveller remarks, 'are maſters of the foreſts; for their dominion 'is not diſputed either by the tiger or lion. 'The only animals they have to dread are the 'ſerpents, who make perpetual war upon them. 'Some of theſe ſerpents are of a prodigious ſize, 'and ſwallow an ape in a moment. Others are 'ſmaller, but more agile, and go in queſt of the 'apes on the trees. . . . . They watch the 'time when the apes ſleep †,' &c.

Diſtinctive Characters of theſe Species.

The malbrouck has cheek-pouches and calloſities on his buttocks. The tail is nearly as long as both the body and head. The eyelids are fleſh-coloured, and the face of a cinere-

* See les Voyages de la Boulaye le Gouz, p. 253. Relat. de Thevenot, tom. iii. p. 20. Voyage de Gemelli Carreri, tom. v. p. 164. Le Recueil des Voyages qui ont ſervi a l'Etabliſſement de la Compagnie de Indes Orientales, tom. vii. p. 36. Voyage d'Orient du P. Philippe, p. 312. et Voyage de Tavernier, tom. iii. p. 64.

† Deſcript. Hiſtorique de Macacar, p. 51.

Plate CCLXXIV.



A Bell Sculp.

MALBROUK.

BL

Plate CCLXXV.



A Bell Sculp.t

CHINESE BONNET.

ous gray. The eyes and muzzle are large. The ears are large, thin, and fleſh-coloured. He has a band of gray hair, like the mone or varied monkey; but the ſuperior parts of his body are of a uniform yellowiſh brown colour, and the inferior are of a yellowiſh gray. He walks on four feet, and is about a foot and a half long from the point of the muzzle to the origin of the tail.

The Chineſe-bonnet appears to be a variety of the malbrouck. They differ in the two following articles: In the former, the hair on the top of the head is diſpoſed in the form of a flat bonnet, from which its name has been derived, and its tail is proportionally longer. The females of both theſe races are ſubject to a periodic evacuation.

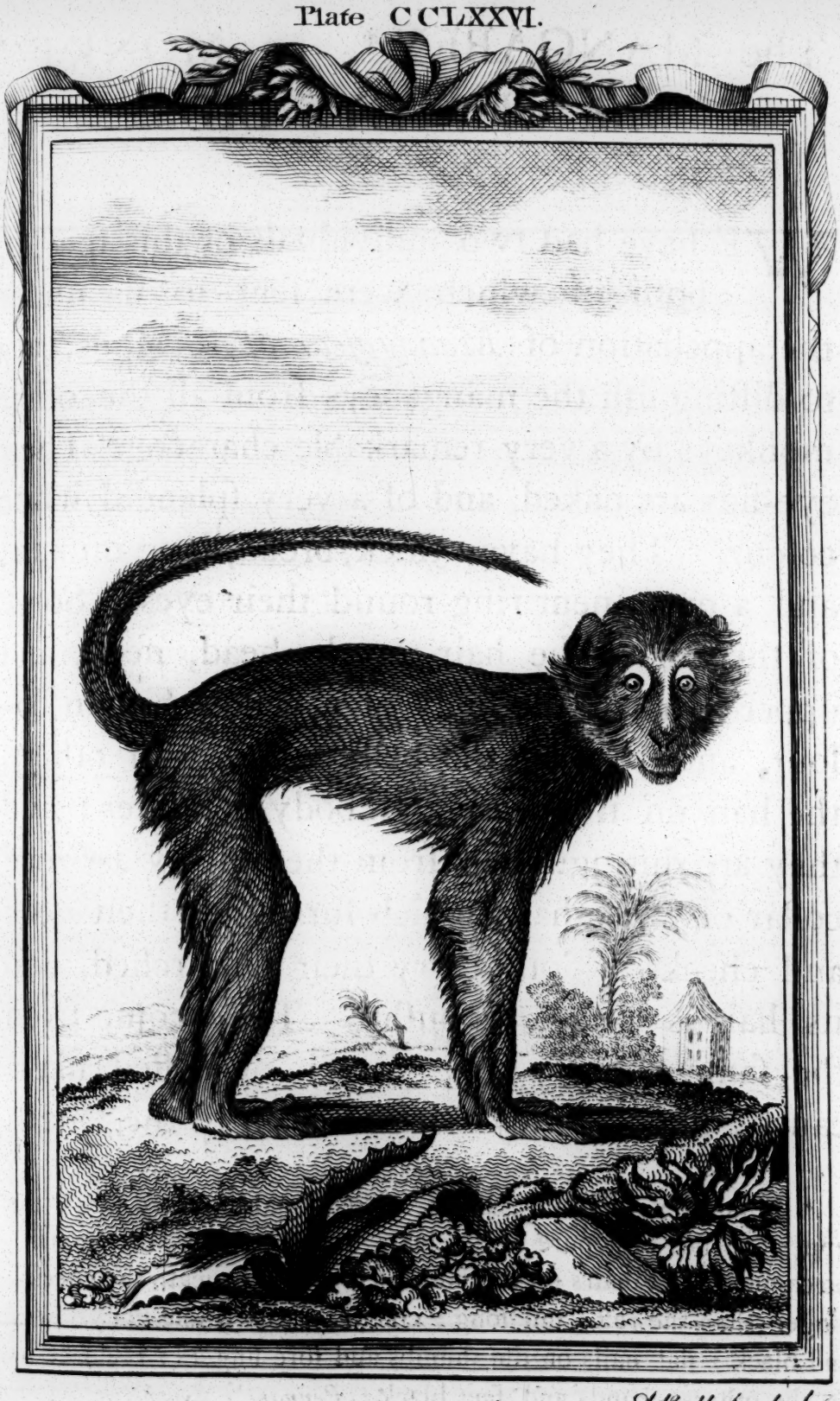
The MANGABEY*, or MONKEY with white EYE-LIDS.

WE have had two individuals of this ſpecies, both of which were ſent to us under the appellation of *Madagaſcar apes*. It is eaſy to diſtinguiſh the mangabeys from all the other monkeys by a very remarkable character. Their eye-lids are naked, and of a very ſplendid white colour. They have a thick, broad, long muzzle, and a prominent ring round their eyes. Some of them have the hair on the head, neck, and upper part of the body of a yellow brown colour, and that on the belly white. In others, the hair on the head and body is lighter; and they are diſtinguiſhed from the reſt by a broad collar of white hair, which ſurrounds their neck and cheeks. Both carry their tail arched, and its hair is long and buſhy. They come from the ſame country as the vari, or ruffed maucauco; and, as they reſemble him in the length

* Monkey with a long, black, naked, and dog-like face; the upper eye-lids of a pure white; ears black, and like the human; no canine teeth; hairs on the ſides of the face, beneath the cheeks, longer than the reſt; tail long; colour of the whole body tawny and black; flat nails on the thumbs and fore fingers; blunt claws on the others; hands and feet black; *Pennant's Synopſ. of Quad. p.* 114.

Simia Æthiops, caudata, imberbis, capillitio arrecto, lunulaque frontis albis; *Linn. Syſt. Nat. p.* 39.

Plate CCLXXVI.



A. Bell Sculpt.

MANGABEY.

B L

Plate CCLXXVII.



A. Bell Sculp.t

MANGABEY,
with a white Collar.

BL

of the muzzle and tail, in the manner of carrying the latter, and in the varieties of colour, they ſeem to form the ſhade between the *makis* and the guenons, or long-tailed monkeys.

Diſtinctive Characters of this Species.

The mangabey has cheek-pouches and calloſities on the buttocks. The tail is as long as both the body and head. He has a prominent ring round the eyes, and the upper eye-lid is extremely white. The muzzle is thick and long. The eye-brows conſiſt of ſtiff, criſped hair, and the ears are black and almoſt naked. The hair on the ſuperior parts of the body is brown, and that on the inferior is gray. There are varieties in this ſpecies: Some of them are of a uniform colour; others have a white circle round the neck, and round the cheeks, in the form of a beard. They walk on four feet, and are nearly a foot and a half long, from the extremity of the muzzle to the origin of the tail. The females of theſe ſpecies menſtruate.

The MONA*, or varied MONKEY.

THE mona is the moſt common of the monkeys. We had one alive for ſeveral years. The mona and the magot agree beſt with the temperature of our climate. This circumſtance is alone ſufficient to prove, that the mona is not a native of the ſouthern regions of Africa and the Eaſt Indies; and, in fact, it is found in Barbary, Arabia, Perſia, and other parts of Aſia

* *Mone, mona, monina, mounina,* the names of the long-tailed monkeys in the Moreſk, Spaniſh, and Provençal languages.—'Peperiuntur in Mauritaniæ ſylvis ſimiarum variæ ſpecies, quarum 'quæ caudam gerunt *monæ* dicuntur;' *Leo. Afric. Deſcrip. vol.* ii. *p.* 757.—'Simiæ caudatæ et barbatæ, quæ vulgo *monichi* vo-'cantur;' *Preſper. Alpin. Hiſt. Egypt. p.* 242. *Nota,* The term *monkey,* which the Britiſh give to the long-tailed apes, is derived from *monichi*; and both ſeem to come from *mona,* or *monina,* the original names of theſe animals.

Varied monkey, with a ſhort thick noſe, of a dirty fleſh colour; hair on the ſides of the face, and under the throat, long; the colour yellow and black; on the forehead, gray; above the eyes, from ear to ear, a black line; the upper part of the body duſky and red; the belly whitiſh; outſide of the thighs, and the feet black; the tail of a cinereous brown; length about a foot and a half, the tail above two; *Pennant's Synopſ. of Quad. p.* 118.

Kebos, and *kipor,* names by which the Greeks and Arabs denote the long-tailed apes, with variegated colours.

Cercopithecus pilis ex nigro et rufo variegatis veſtitus, pedibus nigris, cauda cinerea: Le ſinge varie; *Briſſon. Quad. p.* 141.

which

which were known to the ancients *, who called it *kebos*, *cebus*, or *cæphus*, on account of the variety of its colours. Its face is brown, with a kind of beard interſperſed with white, yellow, and a little black. The hair on the top of the head and neck is a mixture of yellow and black: That on the back is a mixture of red and black. The belly, as well as the inſide of the thighs and legs, are whitiſh. The external parts of the legs and feet are black, and the tail is of a deep gray colour. There are two ſmall white ſpots, one on each ſide of the root of the tail, a creſcent of gray hair on the front, and a black band from the eyes to the ears, and from the ears to the ſhoulders and arms. Some have called it *nonne* from a corruption of *mone* or *mona*, and others the *old man*, on account of its gray beard. But the vulgar appellation of *varied monkey* is beſt known, and correſponds with the Greek name *kebos*, and Ariſtotle's definition of the *monkey with a long tail, and various colours*.

In general, the monkeys have milder diſpoſitions than the baboons, and their character is leſs melancholy than that of the apes. They are extravagantly vivacious, but have no ferocity; for they become tractable the moment their attention is fixed by fear or reſtraint. The mona is particularly ſuſceptible of education, and even of ſome attachment to thoſe who take

* *Monichi* ſimiæ caudatæ et barbatæ ex Æthiopia locis conterminis in Egyptum deducuntur; ſuntque admodum cicures et mundæ; *Proſper. Alpin. Hiſt. Egypt. p.* 242.

care

care of him. The one we kept allowed himſelf to be touched and carried about by the people with whom he was acquainted; but, to others, he permitted not this freedom, and even bit them. He likewiſe endeavoured to obtain his liberty: He was fixed with a long chain. When he could either break the chain or diſengage himſelf, he fled to the fields, and, though he did not ſpontaneouſly return, he allowed himſelf to be taken by his maſter. He eat every thing, roaſted meat, bread, and particularly fruits. He likewiſe ſearched for ſpiders, ants, and inſects *. When ſeveral morſels were thrown to him at once, he filled his cheeks with them. This practice is common to all the baboons and monkeys, to whom Nature has given pouches in their cheeks, where they can keep a quantity of food ſufficient to nouriſh them for a day or two.

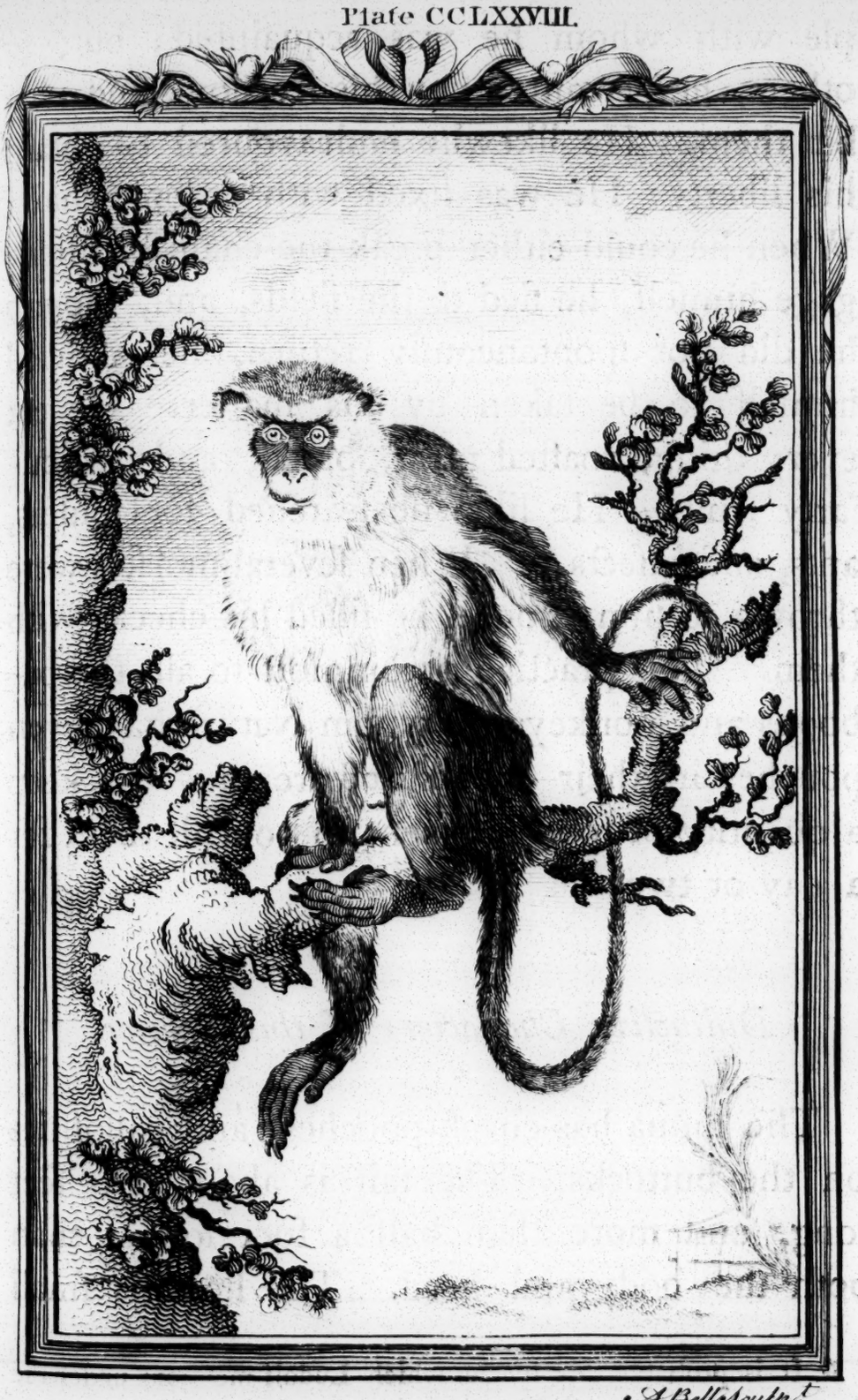
Diſtinctive Characters of this Species.

The mona has cheek-pouches, and calloſities on the buttocks. The tail is about two feet long, and more than half a foot longer than both the body and head. The head is ſmall

* It is probably this ſpecies which Ludolf mentions under the denomination of the *Abyſſinian ape*. 'They come,' ſays he, 'in 'great troops. As they are exceedingly fond of ants and worms, 'they reverſe every ſtone, in order to catch the inſects they cover;' *Hiſt. de l'Abyſſinie*, p. 41.

and

Plate CCLXXVIII.



A. Bell Sculp.t

MONA.

care of him. The one we kept allowed himſelf to be touched and carried about by the people with whom he was acquainted; but, to others, he permitted not this freedom, and even bit them. He likewiſe endeavoured to obtain his liberty: He was fixed with a long chain. When he could either break the chain or diſengage himſelf, he fled to the fields, and, though he did not ſpontaneouſly return, he allowed himſelf to be taken by his maſter. He eat every thing, roaſted meat, bread, and particularly fruits. He likewiſe ſearched for ſpiders, ants, and inſects *. When ſeveral morſels were thrown to him at once, he filled his cheeks with them. This practice is common to all the baboons and monkeys, to whom Nature has given pouches in their cheeks, where they can keep a quantity of food ſufficient to nouriſh them for a day or two.

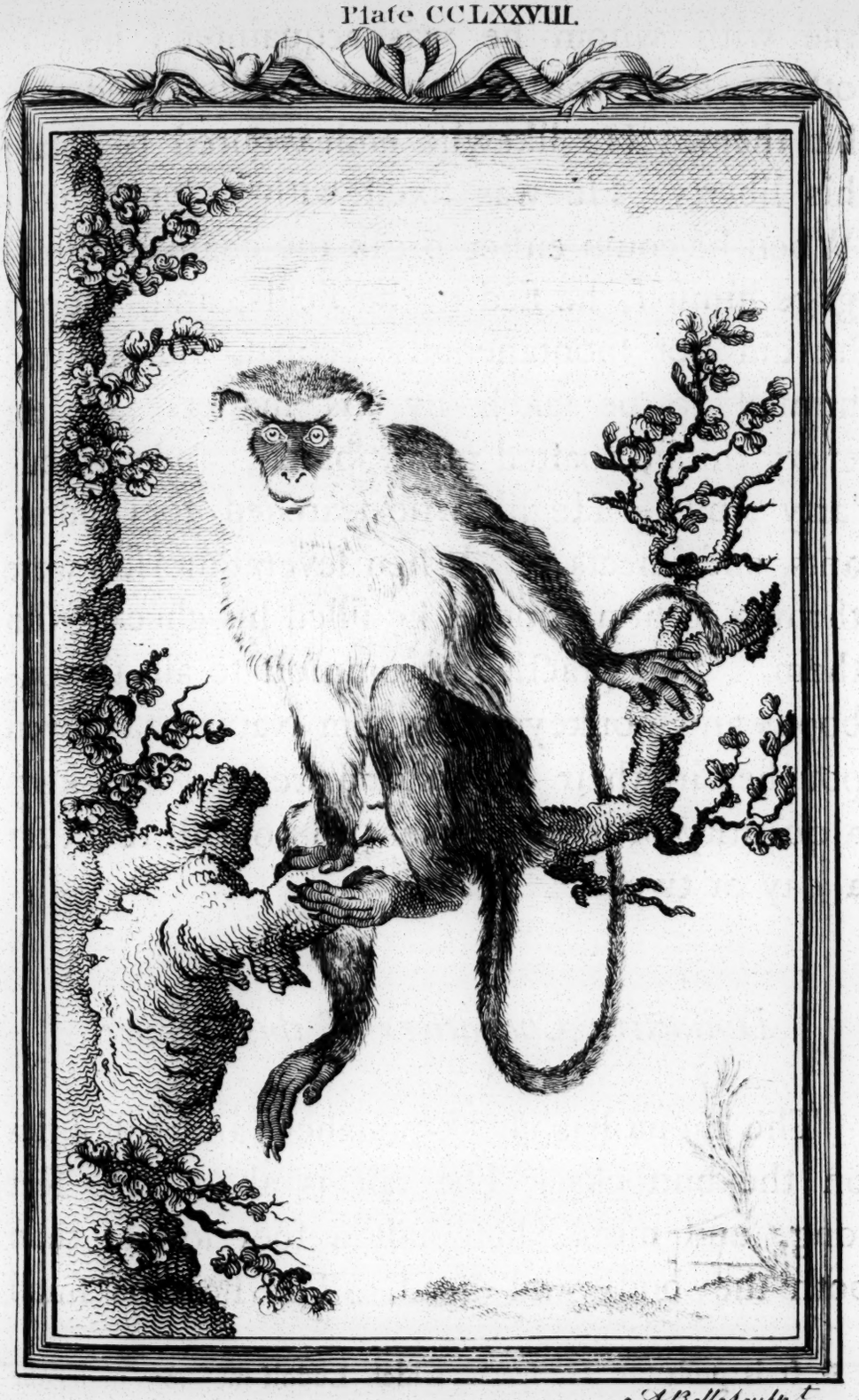
Diſtinctive Characters of this Species.

The mona has cheek-pouches, and calloſities on the buttocks. The tail is about two feet long, and more than half a foot longer than both the body and head. The head is ſmall

* It is probably this ſpecies which Ludolf mentions under the denomination of the *Abyſſinian ape*. 'They come,' ſays he, 'in 'great troops. As they are exceedingly fond of ants and worms, 'they reverſe every ſtone, in order to catch the inſects they cover;' *Hiſt. de l'Abyſſinie*, p. 41.

and

Plate CCLXXVIII.



A. Bell sculp.t

MONA.

and round; the muzzle is thick and ſhort; and the face is of a bright tawny colour. He has a gray band upon the front, and a black band extending from the eyes to the ears, and from the ears to the ſhoulders and arms. He has a kind of gray beard, formed by the hairs on his throat, which is longer than the others. The hair on the body is a reddiſh black, and that on the belly is whitiſh. The outſide of the legs and feet are black; and the tail is of a grayiſh brown colour, with two white ſpots on each ſide of its root. He walks on four feet; and his length, from the point of the muzzle to the origin of the tail, is about a foot and a half. The female is ſubject to the *menſes*.

The CALLITRIX, or GREEN-MONKEY *.

CALLITRIX is a term employed by Homer, to denote, in general, the beautiful colour of the hair of animals. It was not till ſeveral ages after Homer's time, that the Greeks applied this name to particular ſpecies of monkeys. Its application to the animal under conſideration is peculiarly proper. The body is of a beautiful green colour, the throat and belly are white, and the face is of a fine black. He is found in Mauritania, and in the territories of ancient Carthage. Hence it is probable that he was known to the Greeks and Romans, and

* Green monkey with a black and flattiſh face, the ſides of it bounded by long white hairs, falling backwards, and almoſt covering the ears, which are black, and like the human; head, limbs, and whole upper part of the body and tail, covered with ſoft hairs, of a yellowiſh green colour at their ends, and cinereous at their roots; under ſide of the body and tail, and inner ſide of the limbs, of a ſilvery colour, tail very long and ſlender; ſize of a ſmall cat; *Pennant's Synopſ. of Quad. p.* 113.

Simius caillitrichus; *Proſper. Alpin. Egypt. vol.* i.

Simia Sabæa, caudata, imberbis, facie atra, cauda cinerea, natibus calvis; *Linn. Syſt. Nat. p.* 38.

Cercopithecus ex cinereo flaveſcens, genis longis pilis albis obſitis; *Briſſon. Quad. p.* 145.

Green monkey; *Edwards's Gleanings, p.* 10.

In the Cape de Verd iſlands, there are apes with a long tail, and a black face; *Dampier's Voyage, tom.* iv.

that

that it was one of thoſe long-tailed monkeys to which they gave the name of *callitrix*. In the neighbourhood of Egypt, both on the Æthiopian and Arabian ſide, there are white monkeys, which the ancients have likewiſe denoted by the generic name of *callitrix*. Proſper Alpinus and Pietro della Valle * mention theſe white monkeys. We have not ſeen this ſpecies: It is perhaps only a variety of the green monkey, or of the *mona*, which is very common in theſe countries.

The green monkey ſeems alſo to be found in Senegal, as well as in Mauritania and the Cape de Verd iſlands. M. Adanſon relates, that the woods of Podor, along the river Niger, are filled with green apes. 'I diſcovered apes,' ſays he, 'only by the branches they throw down from 'the tops of the trees; for, in other reſpects, they 'are ſo ſilent and nimble in their gambols, that 'it would be difficult to perceive them. I killed 'one, two, and even three, before the others 'ſeemed to be alarmed. However, after moſt of 'them were wounded, they began to take ſhel-

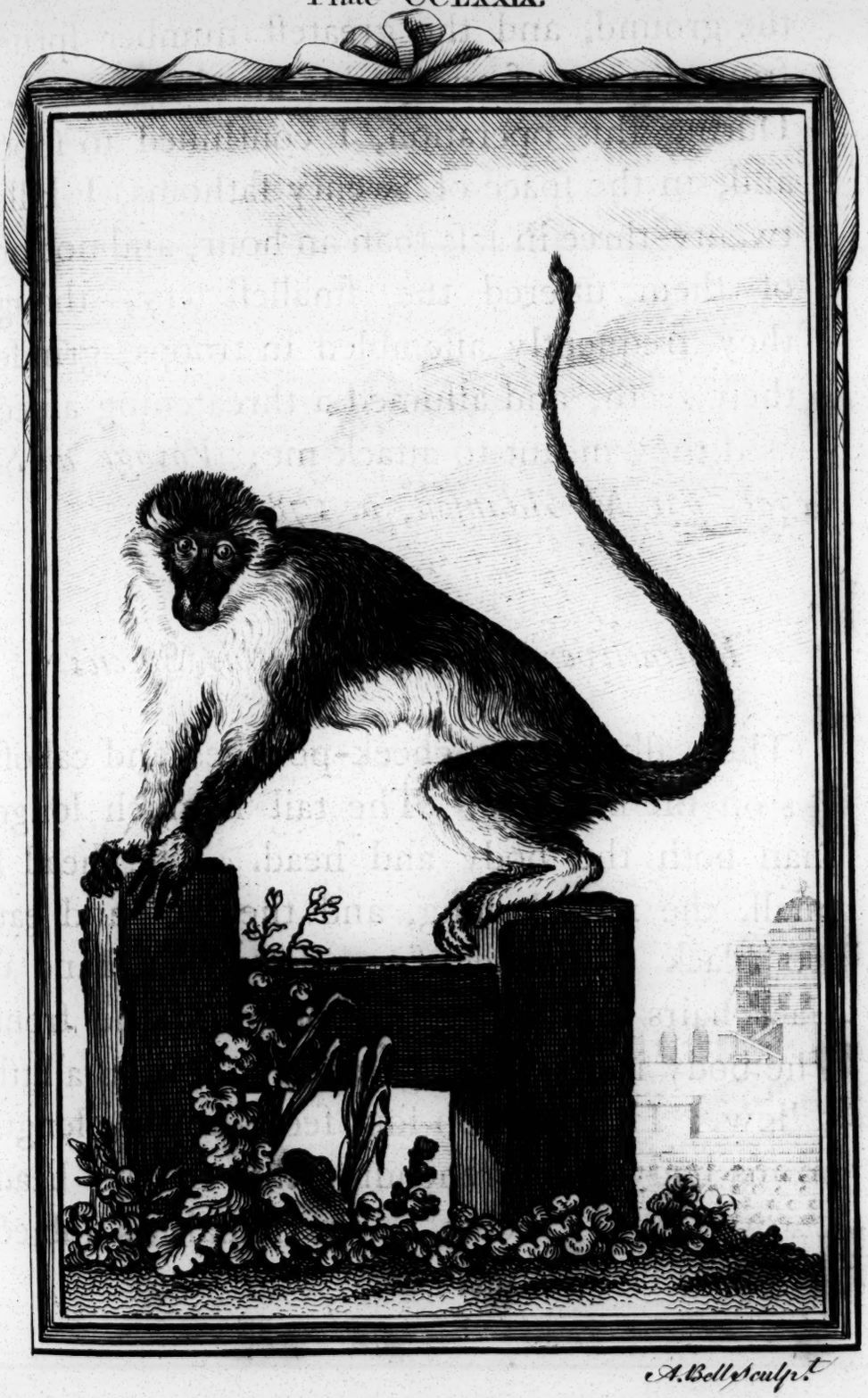
* Simium Callitricum Cairi in ædibus habuimus, felem magnam quadamtenus magnitudine æmulantem, prolixiori corporis figura, capite parvo erat et rotundo —— corpore circa ilia graciliſſimo, toto corpore rufo rutilove ſpectabatur, facies vero humanæ ſimilis fuit nigra, undique barbata, ſed barba albi erat coloris —— caudamque longam rutilamque habebat; *Proſp. Alp. Hiſt. Ægypt. lib.* iv. *p.* 244. *fig. tab.* 20. *No.* 4. —— In Cairo, I likewiſe ſaw ſeveral living animals, as *callitrices*, or white monkeys; *Voyage de Pietro della Valle, tom.* i. *p.* 401.

'ter; ſome of them concealed themſelves be-
'hind the large branches, ſome deſcended on
'the ground, and the greateſt number ſprung
'from the top of one tree to another. . . . . .
'During this operation, I continued to ſhoot,
'and, in the ſpace of twenty fathoms, I killed
'twenty-three in leſs than an hour, and not one
'of them uttered the ſmalleſt cry, though
'they frequently aſſembled in troops, grinded
'their teeth, and aſſumed a threatening aſpect,
'as if they meant to attack me;' *Voyage au Senegal, par M. Adanſon, p.* 178.

Diſtinctive Characters of this Species.

The callitrix has cheek-pouches and calloſities on the buttocks. The tail is much longer than both the body and head. The head is ſmall, the muzzle long, and the face and ears are black. Inſtead of eye-brows, a band of black hairs run along the bottom of the front. The body is of a vivid green mixed with a little yellow. He walks on four feet; and the length of his body, comprehending that of the head, is about fifteen inches. The female is ſubject to the menſtrual flux.

Plate CCLXXIX.



A. Bell Sculpt.

CALLITRIX.

BL

THE MUSTACHE*.

THE muſtache ſeems to belong to the ſame country as the macaque; becauſe, like the latter, his body is ſhorter and more ſquat than in the other monkeys. It is probably the ſame animal which the voyagers to Guiney have called *white-noſe*†; becauſe the lips below the noſe are of a bright white colour, and the reſt of the face is of a blackiſh blue. There are alſo two tufts of yellow hair under the ears, which give it a ſingular appearance; and, as it is, at

* Muſtache monkey, with a ſhort noſe, the end marked with a tranſverſe line of pure white; the face naked, and of a duſky blue; on the cheeks, before the eyes, two large tufts of yellow hairs, like muſtaches; the hair on the top of the head long and upright; round the mouth are ſome black hairs; the colour of the hair on the head yellow, on the body and limbs, a mixture of red and aſh-colour; the reſt yellowiſh; the under part of the body paler than the upper; the feet black; the nails flat: Its length one foot, that of the tail eighteen inches; *Pennant's Synopſ. of Quad. p.* 114.

Cercopithecus alius, Guineenſis; *Marcgr. Braſil. p.* 228. *Raii Synopſ. Quad. p.* 156.

Simia cephus, caudata, buccis barbatis, vertice flaveſcente, pedibus nigris, cauda apice ferruginea; *Linn. Syſt. Nat. p.* 114.

Cercopithecus nigricans, genis et auriculis longis pilis ex albo flavicantibus obſitis, ore cæruleſcente; *Briſſon. Quad. p.* 146.

† There are other apes on the Gold coaſt, which are called *white-noſes*, becauſe that is the only part of their body which is white. They are ferocious and ſtinking animals; *Relat. d'Artus, Hiſt. Gen. des Voyages, tom.* iv. *p.* 238.

the ſame time, very ſmall, it appears to be the moſt beautiful of all the monkeys.

Diſtinctive Characters of this Species.

The muſtache has cheek-pouches and calloſities on the thighs. Its tail is much longer than the body and head, being nineteen or twenty inches in length. Its face is of a bluiſh black colour, with a large white mark which extends over the whole upper lip, which is naked, except a border of black hairs that ſurrounds the margins of both lips. Its body is ſhort and ſquat. It has two tufts of bright yellow hair under the ears, and likewiſe a tuft of curled hair on the top of the head. The hair on the body is of a greeniſh aſh-colour, and that on the breaſt and belly is of a whitiſh aſh-colour. It walks on four feet; and, from noſe to tail, exceeds not eighteen inches in length. The female is ſubject to the menſtrual flux.

Plate CCLXXX.



A. Bell Sculpt.

MUSTAX.

B L

THE TALAPOIN*.

THOUGH the ſize of this monkey be ſmall, its figure is beautiful. Its name ſeems to indicate that it comes from Siam, and the other eaſtern provinces of Aſia. It is certain, however, that it is a native of the Old Continent, and exiſts not in the New; becauſe it has cheek-pouches and calloſities on the buttocks, neither of which characters belong to the ſagoins or ſapajous, the only American animals who can be compared to the monkeys. But, independent of the name, I am inclined to think that this monkey is more common in the Eaſt Indies than in Africa; becauſe it is affirmed by voyagers, that moſt of the apes in this part of Aſia are of a browniſh green colour. 'The 'apes of Guzarat are of a browniſh green co-'lour, and have long white beards and eye-'brows. Theſe animals, which the Banians,

* The Talapoin monkey, with a ſharp noſe, round head, large black naked ears; eyes and end of the noſe, fleſh-coloured; hair on the cheeks very long, and reflected towards the ears: On the chin a ſmall beard; the colour of the whole upper part of the body, and the outſide of the limbs, a mixture of duſky yellow and green; the lower part white tinged with yellow; the tail very long and ſlender, above, of an olive colour; beneath, cinereous; the paws black. Its length is about one foot, and that of the tail, one foot five inches; *Pennant's Synopſ. of Quad. p.* 115.

'from a religious principle, allow to multiply 'without end, are ſo familiar, that numbers of 'them perpetually enter the houſes; and the 'ſellers of fruits and confections have much 'difficulty in preſerving their wares*.'

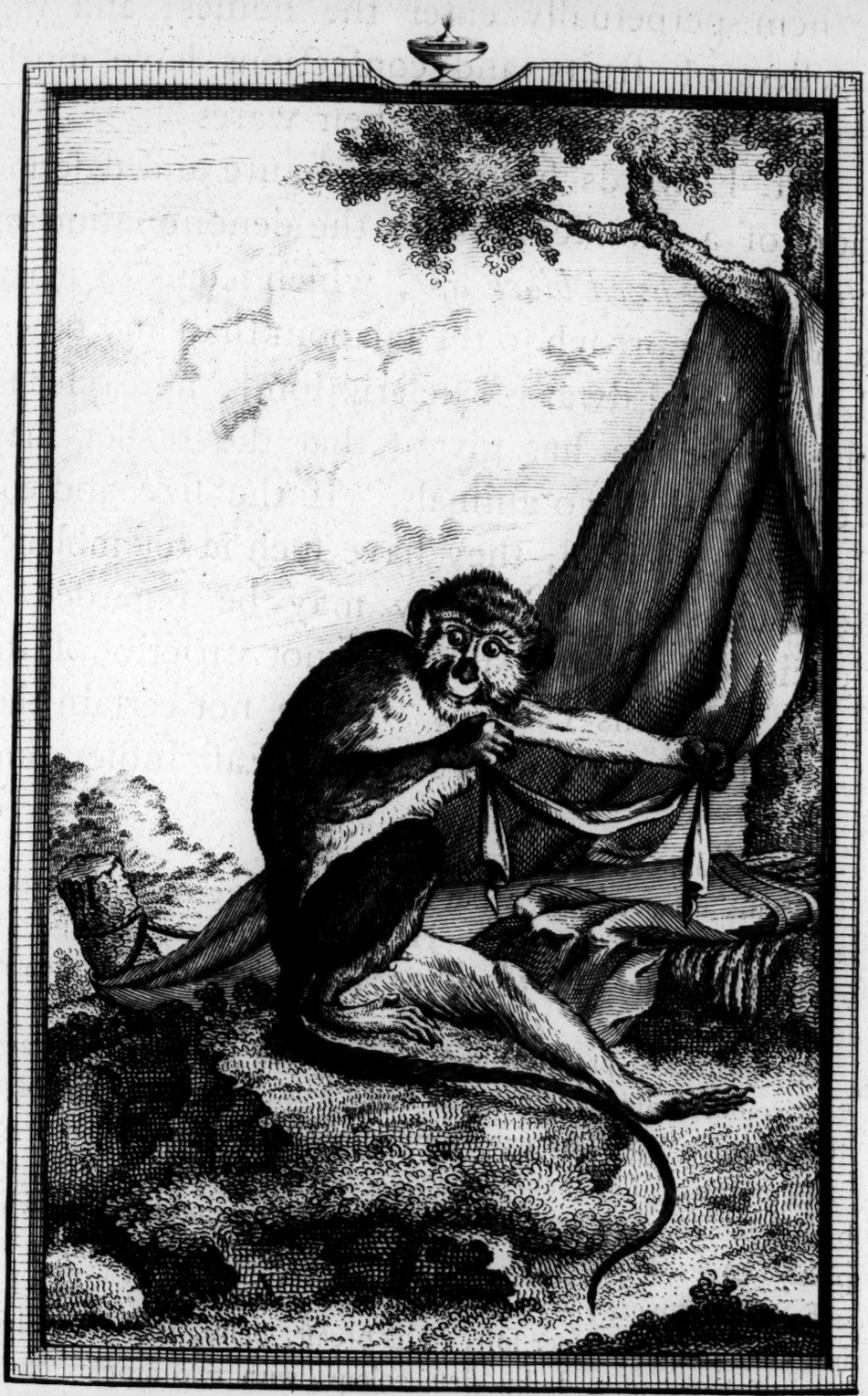
Mr. Edwards has given a figure and deſcription of a monkey, under the denomination of *the middle-ſized black ape*, which ſeems to make a nearer approach to the talapoin than any other. I here add Edwards's deſcription†, and refer to the figure he has given, that the reader may compare the two animals. If the ſize and colour be excepted, they have ſuch a reſemblance to each other, that they may be regarded as ſpecies very nearly allied, if not varieties of the ſame. In this caſe, as we are not certain that our talapoin is a native of the Eaſt Indies, and

* Hiſt. Gen. des Voyages, tom. x. p. 67.

† This monkey was about the ſize of a large cat, of a gentle nature in reſpect to any one. He loved playing with a kitten, as moſt monkeys do. He was a little vicious, according to their nature, being a male.

His head was pretty round; the ſkin of the face of a tawny fleſh-colour, thinly covered with black hair: The ears were ſhaped like the human. The eyes were of a reddiſh hazle colour, with black pupils. The hair was long above the eyes, and the eyebrows joined together; it was alſo long on the temples, which partly covered the ears. The head, back, arms, legs, and tail, were covered with pretty long, looſe, duſky, black hair, not very harſh, or over ſoft. His breaſt, belly, &c. were almoſt bare of hair, of a duſky fleſh-colour, with two nipples on the breaſt. The four paws were all of them formed ſomething like a human hand; they are covered with black ſoft ſkin, having little or no hair on them; the nails are flat; *Edwards's Gleanings*, *p.* 221.

Plate CCLXXXI.



A Bell Sculpt.

TALAPOIN

B L

as Edwards assures us, that his monkey came from Guiney, we must refer the talapoin to the same climate, or rather suppose that it is common to the southern regions of both Africa and Asia. It is probably the same species of black apes mentioned by Bosman, under the name of *baurdmannetjes*, whose skin, he remarks, is an excellent fur *.

* In Guiney, there is a third species of ape, which is very beautiful, and generally exceeds not two feet in length. Its hair is extremely black, and more than an inch long, and its beard is white; from which circumstance the Dutch call it *bourdmannetje*. Bonnets are made of their skins, and each fur sells at four crowns; *Voyage de Bosman, p.* 258.

The DOUC*, or Cochin-China Monkey.

THE douc is the laſt of that claſs of animals which we have called *apes*, *baboons*, and *monkeys*. Without being preciſely any of theſe three kinds, he participates of each. He is allied to the monkeys by the length of his tail, to the baboons by his ſize, and to the apes by his flat face. He ſeems, by a particular character, to form the ſhade between the monkeys and ſapajous: In theſe two tribes of animals, the monkeys are diſtinguiſhed by naked buttocks, and all the ſapajous have theſe parts covered with hair: Of all the monkeys the douc alone has hair on the buttocks, like the ſapajous. He reſembles them alſo in the flatneſs of the muzzle; but, upon the whole, he has much more affinity to

* The name of this animal in Cochin-China. It is called *ſifac* in Madagaſcar.

Cochin-China monkey, with a ſhort flattiſh face, bounded on each ſide by long hairs of a yellowiſh white colour; on the neck a collar of purpliſh brown; the lower part of the arms, thighs, and tail, are white; the upper part of the arms and thighs black; the back, belly, and ſides, gray, tinged with yellow: Above the root of the tail is a ſpot of white, which extends, beneath, as far as the lower part of the belly and part of the thighs: The feet are black, and the buttocks covered with hair. This is a very large ſpecies, about four feet long, from the noſe to the tail; but the tail not ſo long; *Pennant's Synopſ. of Quad. p.* 119.

Cercopithecus cinereus, genis longis pilis ex albo flavicantibus obſitis, torque ex caſtaneo purpuraſcente. Le grand ſinge de la Cochin-Chine; *Briſſon. Quad. p.* 146.

the monkeys than to the ſapajous, from which he differs by his tail not being prehenſile, and by other eſſential characters. Beſides, the interval which ſeparates the two tribes is immenſe; for the douc and all the monkeys belong to the Old Continent, and all the ſapajous are natives of the New World. It may likewiſe be remarked, that, as the douc, like the monkeys, has a long tail, but has no calloſities on the buttocks, he forms the ſhade between the orang-outangs and monkeys; as the gibbon does on another account, having no tail, like the orang-outangs, but, like the monkeys, having calloſities on the buttocks. Independent of theſe general relations, the douc has peculiar characters which render him diſtinguiſhable, at firſt ſight, from the apes, baboons, monkeys, and ſapajous. His robe, which is variegated with many colours, ſeems to indicate the ambiguity of his nature, and diſtinguiſhes his ſpecies in a conſpicuous manner. Round his neck there is a collar of a purpliſh blue colour. A white beard ſurrounds his cheeks. His lips are black, and he has a black ring round his eyes. His face and ears are red, the top of his head and body gray, the breaſt and belly yellow. His legs are white below and black above. His tail is white, with a large ſpot of the ſame colour on his loins. The feet are black, with ſeveral ſhades of different colours.

This animal, which I was aſſured came from Cochin-China, is likewiſe found in Madagaſcar; and it is the ſame with what Flacourt mentions, under the name of *ſifac*, in the following terms: 'In Madagaſcar, there is another ſpecies 'of white monkey, with a tawny collar, which 'frequently walks on the two hind legs. It has 'a white tail, and two tawny ſpots on the flanks. 'It is larger than the *vari* (maucauco), and ſmaller than the *varicoſſi* (vari). This ſpecies is called *ſifac*, and feeds upon beans. It is very frequent about Andrivoura, Dambourlomb, and 'Ranafoulchy *.' The tawny collar, the white tail, and the ſpots on the flanks, indicate, in the cleareſt manner, that the ſifac of Madagaſcar is the ſame ſpecies with the douc of Cochin-China.

Travellers aſſure us, that, in the ſtomachs of the large apes in the ſouthern provinces of Aſia, bezoars are found of a ſuperior quality to thoſe of the goats and gazelles. Theſe large apes are the ouanderou and the douc; and, of courſe, to them the production of the bezoars muſt be referred. It is alleged, that the bezoars of the ape are always round, while the other kinds are of different figures †.

Diſtinctive

* Voyage de Flacourt, p. 153.

† As the apes, as well as the goats, eat the buds of certain ſhrubs, bezoar ſtones are produced in their bellies. They are often found in the excrements which they diſcharge when flying

Plate CCLXXXII.



A. Bell Sculpt.

DOUC.

BL

Diſtinctive Characters of this Species.

The douc has no calloſities on the buttocks, but is every where covered with hair. His tail is not ſo long as his body and head. His face is covered with a reddiſh down. The ears are naked, and of the ſame colour with the face. The lips, as well as the orbits of the eyes, are brown. The colours of the hair are vivid and various. He has a purpliſh brown collar round his neck. He has white on his front, head, body, arms, legs, &c. and a kind of yellowiſh white beard. The top of the front and the upper part of the arms are black. The under parts of the body are of a cinereous gray and a whitiſh yellow colour. The tail and under part of the loins are white. He walks as often on two as on four feet. When erect, he is three and a half or four feet high. It is uncertain whether the females of this ſpecies be ſubject to the menſtrual diſcharge.

flying from danger. Theſe ſtones are dearer and more eſteemed than any other kind: They are likewiſe round, and have more powerful virtues. One grain of this bezoar has been found to have an equal effect with two of that produced by the goats; *Deſcript. Hiſt. de Macacar, p.* 51. *Nota*, From comparing this paſſage with that of Knox, related in the article *ouanderou*, it appears, that the ouanderous feed upon the buds of trees, and, of courſe, moſt commonly produce bezoars.

The SAPAJOUS* and the SAGOINS†.

WE now paſs from the Old Continent to the New. All the four-handed animals formerly deſcribed, and which were comprehended under the generic names of *apes*, *baboons*, and *monkeys*, belong excluſively to the Old Continent; and all the reſt, whoſe hiſtory we are about to relate, are found in the New World only. We firſt diſtinguiſh them by the two generic names *ſapajous* and *ſagoins*. The feet of both are conſtructed nearly in the ſame manner with thoſe of the apes, baboons, and monkeys. But they differ from the apes by having tails. They differ from the baboons by the want of cheek-pouches and calloſities on their buttocks. In fine, they differ from the apes, baboons, and monkeys, by having the portion between their noſtrils very broad and thick, and the apertures placed to a ſide and not under the noſe. Hence the ſapajous and ſagoins differ not only ſpecifically but generically from the apes,

* *Sapajou*, a word derived from *cayouaſſou*, the name of theſe animals in Braſil, and which is pronounced *ſajouaſſou*.

† *Sagoin*, a word derived from *cagui*, which is pronounced *ſagoui*, and is the name of theſe animals in Braſil.

baboons,

baboons, and monkeys. When compared with each other, we likewiſe find that they differ in generic characters; for all the ſapajous have prehenſile tails, which are ſo conſtructed that the animals can uſe them as fingers to lay hold of objects. This under part of the tail, which they fold, extend, curl up, or unfold at pleaſure, and by the extremity of which they ſuſpend themſelves on the branches of trees, is generally deprived of hair, and covered with a ſmooth ſkin. The tails of all the ſagoins, on the contrary, are proportionally longer than thoſe of the ſapajous, and are ſtraight, flaccid, and entirely covered with hair; ſo that they can neither uſe the tail in laying hold of objects, nor in ſuſpending themſelves. This difference alone is ſufficient to diſtinguiſh a ſapajou from a ſagoin.

We know eight ſapajous, which may be reduced to five ſpecies: 1. The *ouarine* or *gouariba* of Braſil. This ſapajou is as large as a fox, and differs from the *alouate* of Cayenne in colour only. The hair of the ouarine is black, and that of the alouate is reddiſh; and, as they reſemble each other in every other reſpect, I conſider them as belonging to the ſame ſpecies. 2. The *coaita*, which is black like the ouarine, but not ſo large. The *exquima* ſeems to be a variety of this ſpecies. 3. The *ſajou*, or *ſapajou*, properly ſo called, is ſmall, of a brown colour, and

and commonly known by the name of the capuchin monkey. Of this ſpecies there is a variety, which we ſhall call the *gray ſajou*, to diſtinguiſh it from the *brown ſajou*. 4. The *ſai*, which ſome travellers have called the *weeper*, is ſomewhat larger than the ſajou, and has a broader muzzle. There are two kinds, which differ in colour only, the one being reddiſh brown, and the other whitiſh red. 5. The *ſaimiri*, which is commonly called the *orange monkey*. It is the ſmalleſt and moſt beautiful of the ſapajous.

We are acquainted with ſix ſpecies of ſagoins: 1. The *ſaki*, which is the largeſt, and whoſe tail is covered with hair ſo long and buſhy, that it has been called the *fox-tailed monkey*. There ſeems to be a variety in this ſpecies. I have ſeen two, both of which appeared to be adults; but the one was almoſt twice as large as the other. 2. The *tamarin* is generally black, with the four feet yellow. But they vary in colour; for I have ſeen ſome of them brown, and ſpotted with yellow. 3. The *ouiſtiti*, which is remarkable for large tufts of hair round its face, and an annulated tail. 4. The *marikina*, which has a mane round the neck, and buſhy hair, like the lion, at the end of the tail. From this circumſtance it has received the appellation of the *lion-monkey*. 5. The *pinche*, whoſe face is of a beautiful black colour, with hair which deſcends

from the top and each ſide of the head, in the form of long ſmooth treſſes. 6. The *mico* is the moſt beautiful of the ſagoins. Its hair is of a ſilver white colour, and its face is as red as vermilion.

We proceed to the hiſtory and deſcription of each of theſe ſapajous and ſagoins, moſt of which have hitherto been unknown.

The OUARINE* and ALOUATE†.

THE ouarine and alouate are the largeſt four-handed animals in the New Continent. In ſize they much exceed the largeſt monkeys, and approach to the magnitude of

* Ouarine, the name of this animal at Maragnon.

The preacher monkey, with black ſhining eyes, ſhort round ears, and a round beard under the chin and throat. The hairs on the body are of a ſhining black, long, yet lie ſo cloſe on each other, that the animal appears quite ſmooth. The feet and end of the tail are brown. The tail is very long, and always twiſted at the end. It is of the ſize of a fox; *Pennant's Synopſ. of Quad. p.* 122.

The monkeys called *ouarines* are all black, and of the ſize of large dogs. They cry ſo loud as to be heard at the diſtance of a league; *Miſſ. du P. Abbeville, p.* 152.

Guariba; *Marcgr. Braſil. p.* 226. *Raii Synopſ. Quad. p.* 153.

Aquiqui; *De Laët, p.* 486. *Grew's Muſ. p.* 133.

Howling baboons; Guariba; *Bancroft's Guiana, p.* 153.

Simia Beelzebub, caudata, barbata, nigra, cauda prehenſili, extremo pedibuſque fuſcis; *Linn. Syſt. Nat. p.* 37.

Cercopithecus niger, pedibus fuſcis; *Briſſon. Quad. p.* 137.

† Alouate, *alouata* at Cayenne, is only a variety of the ouarine. It is of a ferruginous or reddiſh bay colour; and the Indians call it the *king* of the monkeys.

Cercopithecus barbatus maximus, ferruginoſus, ſtentoroſus. Alouata. Singe rouge; *Barrère, Hiſt. Franc. Equin. p.* 150.

Cercopithecus barbatus ſaturate rufus; *Briſſon. Quad. p.* 147.

Simia ſeniculus, caudata, barbata, rufa, cauda prehenſili; *Linn. Syſt. Nat. p.* 37.

Arabata; *Gumilla Orenoque, tom.* ii. *p.* 8. *Bancroft's Guiana, p.* 135.

baboons.

baboons. They have prehenſile tails, and conſequently belong to the family of ſapajous, in which they hold a diſtinguiſhed rank, not only by their ſtature, but alſo by their voice, which reſounds like a drum, and is heard at a great diſtance. Marcgrave relates*, 'That, every 'morning and evening, the ouarines aſſemble in 'the woods; that one of them takes a more ele-'vated ſtation, and gives a ſignal with his hand 'for the others to ſit around and liſten to him; 'that, when he perceives them to be all ſeated, 'he begins a diſcourſe, in a tone ſo loud and 'rapid as to be heard at a great diſtance; and a 'perſon would be led to think that the whole 'were crying together; that all the reſt, how-'ever, keep the moſt profound ſilence; that, 'when he ſtops, he gives a ſignal with his hand 'for the others to reply; that, in an inſtant, the 'whole cry together, till he commands ſilence 'by another ſignal, which they obey in a mo-'ment; that the firſt reſumes his diſcourſe or 'ſong; and that, after hearing him attentively 'for a conſiderable time, the aſſembly breaks 'up.' Theſe facts, which Marcgrave ſays he has often witneſſed, may perhaps be exaggerated, and ſeaſoned a little with the marvellous: The whole may be founded on the terrible noiſe made by theſe animals. They have a kind of oſſeous drum in their throat, in the concavity of which the ſound is augmented, multiplied, and

* Marcgrav. Hiſt. Braſ. p. 226.

makes a howling noiſe. Hence theſe ſapajous have been diſtinguiſhed from all others by the name of *howlers*. We have never ſeen the ouarine, but have the ſkin of an alouate, and likewiſe a dried fœtus of the ſame ſpecies, in which the bone of the throat, the inſtrument of the great noiſe he makes, is already perceptible *. According to Marcgrave, the ouarine has a large ſquare face, black and brilliant eyes, ſhort, roundiſh ears, and a tail naked at the extremity, which adheres firmly to every thing it can embrace. The hair on the whole body is black, long, ſmooth, and luſtrous; that on the chin and throat is longer, and forms a kind of round beard; and that on the hands, feet, and part of the tail, is brown. The female is of the ſame colour with the male, and differs from him only by being ſmaller. The females carry their young on their back, and leap with them from branch to branch, and from tree to tree. The young embrace with their arms and hands the narroweſt part of the mother's body, and remain firmly fixed as long as ſhe is in motion. Beſides, theſe animals are ſo wild and miſchievous,

* The alouate monkey is a ſavage animal, of a reddiſh bay colour, very large, and, by means of the ſingular ſtructure of the os hyoides, makes a terrible rattling noiſe, which is heard at a great diſtance; *Barrère, Hiſt. Franc. Equin. p.* 150.——In the iſland of St. George, under the Tropic, and about two leagues from the continent of America, there are monkeys as large as calves, which make ſuch a ſtrange noiſe, that people who are not accuſtomed to it think the mountains are falling.——They are exceedingly wild; *Voyage de Gentil, tom.* i. *p.* 15.

that they can neither be conquered nor tamed. They bite cruelly; and though not carnivorous, they fail not to excite terror by their frightful voice, and their ferocious aſpect. As they feed only upon fruits, pot-herbs, grain, and ſome inſects, their fleſh is not bad eating*. 'The hunt-
'ers,' Oexmelin remarks, 'bring home in the
'evening the monkeys they kill in the country
'of Cape Gracias-a-Dio. They roaſt one part
'of theſe monkeys, and boil the other: The
'fleſh is good, and reſembles that of the hare;
'but it is ſweetiſh, and requires a great deal of
'ſalt in dreſſing. The fat is very good, and
'as yellow as that of a capon. We lived upon

* Monkeys are the moſt common game, and the moſt agreeable to the taſte of the Amazon Indians.—Some of them are as large as a greyhound; *Voyage ſur la Rivière de l'Amazone, par M. de la Condamine, p.* 164.—Cayenne is the country of monkeys.—When the reluctance at eating them is once overcome, it is certain that their fleſh is very good. It is white, and, though generally not overcharged with fat, it fails not to be tender, delicate, and well taſted. Fine ſoup is made of their heads, which are ſerved up like boiled capons; *Voyage de Deſmarchais, tom.* iii. *p.* 311 *et* 338.—There are monkeys in Cayenne of the ſize of large dogs, and of a reddiſh colour. They are called *howlers*; becauſe, when in troops, they make a noiſe like a flock of hogs fighting. They inſpire terror, and have very large mouths. I believe they are ferocious. When the Savages ſhoot them with arrows, they extract the arrow out of their bodies with their hands, like a human creature. The fleſh of the howlers is very good, and reſembles mutton. One of them is a meal to ſix perſons. They have a horn in their throat, which renders their cries hideous; *Voyage de Binet, p.* 341.——The Achagua ſavages along the river Oronoko are fond of the yellow monkeys called *arabata*, which make an inſupportable noiſe every morning and evening; *Hiſt. de l'Orenoque, par Gumilla, p.* 8.

‘ theſe animals during all the time we remained
‘ there, becauſe we could procure no other food,
‘ and the hunters ſupplied us daily with as many
‘ as we could eat. I went to ſee this ſpecies of
‘ hunting, and was ſurpriſed at the ſagacity of
‘ theſe animals, not only in diſtinguiſhing par-
‘ ticularly thoſe who make war againſt them,
‘ but, when attacked, in defending themſelves,
‘ and providing for their own ſafety. When
‘ we approached, they all aſſembled together,
‘ uttered loud and frightful cries, and threw at
‘ us dried branches which they broke off from
‘ the trees. Some of them voided their excre-
‘ ments in their hands, and threw them at our
‘ heads. I likewiſe remarked that they never
‘ abandoned one another; that they leapt from
‘ tree to tree with incredible agility; and that
‘ they flung themſelves headlong from branch
‘ to branch, without ever falling to the ground;
‘ becauſe, before reaching the earth, they always
‘ caught hold of a branch either with their hands
‘ or tail; ſo that, if not ſhot dead at once, they
‘ could not be laid hold of; for, even when
‘ mortally wounded, they remain fixed to the
‘ trees, where they often die, and fall not till
‘ they are corrupted. More than four days af-
‘ ter death, I have ſeen them firmly fixed to the
‘ trees; and fifteen or ſixteen of them are fre-
‘ quently ſhot before three or four of them can
‘ be obtained. What is ſingular, as ſoon as one
‘ is wounded, the reſt collect about him, and
‘ put

'put their fingers into the wound, as if they 'meant to ſound it; and when much blood is 'diſcharged, ſome of them keep the wound ſhut, 'while others make a maſh of leaves, and dexte-'rouſly ſtop up the aperture. This operation I 'have often obſerved with much admiration. 'The females bring forth but one young, which 'they carry in the ſame manner as the Negreſſes 'do their children. The young monkey em-'braces its mother's neck with the two fore-feet, 'and with the two hind it lays hold of the mid-'dle of her back. When ſhe wants to give it 'ſuck, ſhe takes it in her paws, and preſents the 'breaſt to it like a woman. . . There is no 'other method of obtaining the young but by 'killing the mother; for ſhe never abandons it. 'When ſhe is killed, it falls from her, and may 'then be ſeized. When theſe animals are em-'barraſſed, they aſſiſt each other in paſſing a 'brook, or from one tree to another. . . . Their 'cries are heard at the diſtance of more than a 'league *.'

Moſt of theſe facts are confirmed by Dampier†: He aſſures us, however, that the females generally

* Hiſt. des Aventuriers, par Oexmelin, tom. ii. p. 251.

† The monkeys found in the neighbourhood of the Bay of Campeachy are the ugliеſt I ever ſaw. They are much bigger than a hare, and have great tails, about two feet and a half long. The under ſide of their tails is all bare, with a black hard ſkin; but the upper ſide, and all the body, is covered with coarſe, long, black, ſtaring hair. Theſe creatures keep together 20 or 30 in a company, and ramble over the woods, leaping from tree to tree. If they meet with a ſingle

generally produce two young, one of which the mother carries between her arms, and the other on her back. In general, the ſapajous, even of the ſmalleſt ſpecies, are not very prolific; and it is probable that the largeſt produce not above one or two at a time.

Diſtinctive Characters of this Species.

The ouarine has the apertures of the noſtrils placed at a ſide, and not under the noſe; the

perſon, they will threaten to devour him. When I have been alone, I have been afraid to ſhoot them, eſpecially the firſt time I met them. They were a great company dancing from tree to tree, over my head, chattering and making a terrible noiſe, and a great many grim faces, and ſhewing antick geſtures. Some broke down dry ſticks and threw at me; others ſcattered their urine and dung about my ears; at laſt, one bigger than the reſt, came to a ſmall limb juſt over my head, and leaping directly at me, made me ſtart back; but the monkey caught hold of the bough with the tip of his tail, and there continued ſwinging to and fro, and making mouths at me.——At laſt I paſt on, they ſtill keeping me company, with the like menacing poſtures, till I came to our huts. The tails of theſe monkeys are as good to them as one of their hands; and they will hold as faſt by them. If two or more of us were together, they would haſten from us. The females with their young ones are much troubled to leap after the males; for they have commonly two: One ſhe carries under one of her arms; the other ſits on her back, and claſps her two fore paws about its neck. Theſe monkeys are the moſt ſullen I ever met with, for all the art we could uſe would never tame them. It is a hard matter to ſhoot one of them, ſo as to take it, for if it gets hold with its claws or tail, it will not fall as long as one breath of life remains. After I have ſhot at one and broke a leg or an arm, I have pitied the poor creature to ſee it look and handle the wounded limb, and turn it about from ſide to ſide. Theſe monkeys are very rarely, or (as ſome ſay) never on the ground; *Dampier, vol.* ii. *part* ii. *p.* 60.

partition

partition of the noſtrils is very thick. He has neither cheek-pouches, nor calloſities on the buttocks, which are covered with hair, like the reſt of the body. He has a long, prehenſile tail, black, long hair, and a large concave bone in his throat. He is of the ſize of a grey-hound; and the long hair under his neck forms a kind of round beard. He generally walks on four feet.

The alouate has the ſame characters with the ouarine, and only differs from him by having a larger beard, and the hair of a reddiſh brown colour. I know not whether the females of theſe ſpecies be ſubject to the menſes: From analogy, I ſhould preſume that they are not, having generally found, that the apes, baboons, and monkeys with naked buttocks, are alone ſubject to this evacuation.

The COAITA* and EXQUIMA†.

NEXT to the ouarine and alouate, the coaita is the largeſt of the ſapajous. I ſaw one of them at the palace of the Duke of Bouil-

* Four-fingered monkey, with a long flat face, of a ſwarthy fleſh colour; eyes ſunk in the head; ears like the human; limbs of a great length, and uncommonly ſlender; hair black, long, and rough; only four fingers on the hand, being quite deſtitute of a thumb; five toes on the feet; nails flat; tail long, and naked below, near the end; body ſlender; about a foot and a half long; tail near two feet, and ſo prehenſile as to ſerve every purpoſe of a hand.

Coaita, or *quoata*, the name of this animal in Guiana.

Circopithecus major niger, faciem humanam referens. *Quoata*; *Barrère Hiſt. Nat. de la Franc. Equin. p.* 150.

Quato; *Bancroft's Guiana, p.* 131.

Cercopithecus in pedibus anterioribus pollice carens; cauda inferius verſus apicem pilis deſtituta; Le Belzebub; *Briſſon, Quad. p.* 150.

Simia paniſcus, caudata, imberbis, atra, cauda prehenſili, et apicem ſubtus nuda; *Linn. Syſt. Nat. p.* 37.

Spider monkey; *Edwards's Gleanings, vol.* iii. *p.* 222.

Simia fuſca major, palmis tetradactylis, cauda prehenſili, ad apicem ſubtus nuda; the four-fingered monkey; *Brown's Hiſt. of Jamaica, chap.* v. *ſect.* 5.

† Spotted monkey, with a long white beard; colour of the upper parts of the body reddiſh, as if they had been ſinged, marked with white ſpecks; the belly and chin whitiſh; tail very long: Is a ſpecies of a middle ſize.

Cercopithecus barbatus Guineenſis, Exquima; *Marcgrav. Hiſt. Nat. Braſil. p.* 227. *Raii Syn. Quad. p.* 156.

Cercopithecus barbatus fuſcus, punctis albis interſperſis, barba alba; *Briſſon. Quad. p.* 147. No. 23. *p.* 148. No. 24.

Simia Diana, caudata, barbata, fronte barbaque faſtigiata; *Linn. Syſt. Nat. p.* 38.

lon,

lon, where, by its familiarity, and even its careſſes, it procured the affection of thoſe to whoſe charge it was committed. But, notwithſtanding all the care and attention it received, it was unable to reſiſt the cold of the winter 1764. It died, to the regret of its maſter, who was ſo obliging as to ſend it to me, to be placed in the Royal Cabinet. I ſaw another in the houſe of the Marquis de Montmirail. This was a male, and the former a female. Both were equally tractable and well tamed. Hence this ſapajou, by its mild and docile diſpoſition, differs much from the ouarine and alouate, who are ſo wild that no art can tame them. Neither has it, like them, an oſſeous pouch in the throat. Like the ouarine, its hair is black, but rough. The coaita likewiſe differs from all the other ſapajous, by having only four fingers on his hands. By this character, and his prehenſile tail, he is eaſily diſtinguiſhed from the monkeys, who have all five fingers, and a flaccid tail.

The animal called *exquima* by Marcgrave, is very nearly allied to the *coaita*, and is perhaps only a variety of that ſpecies. This author ſeems to have been deceived when he tells us that the exquima is a native of Guiney and Congo. The figure he has given of it was alone ſufficient to have convinced him of his error; for it repreſents this animal with a tail rolled up at the point, a character which belongs excluſively to the ſapajous. Of courſe, Marcgrave's exquima is not

a monkey

a monkey of Guiney, but a ſapajou with a prehenſile tail, which had been tranſported thither from Braſil. The name *exquima*, or *quima*, by abſtracting the article *ex*, and which ought to be pronounced *quoima*, is not very different from *quoaita*, the manner in which ſeveral authors ſpell the name *coaita*. Hence every circumſtance concurs in eſtabliſhing Marcgrave's *exquima*, which he calls a Guiney monkey, to be a Braſilian *ſapajou*, and a variety only of the coaita, which it reſembles in diſpoſition, ſize, colour, and the prehenſile tail. The moſt remarkable difference is, that the exquima has whitiſh hair on the belly, and a white beard, two inches long, under the chin*: Our coaitas have neither a beard nor white hair on the belly. But theſe differences ſeem not ſufficient to conſtitute two diſtinct ſpecies; for we learn from the evidence of travellers, that ſome coaitas are black and others white, and ſome have beards and others no beards. 'There are,' ſays Dampier, 'great 'droves of monkeys, ſome of them white, but 'moſt of them black; ſome have beards, others

* Cercopithecus barbatus Guineenſis; in Congo vocatur *exquima*; pilos habet fuſcos, ſed per totum dorſum quaſi aduſtos ſeu ferrugineos; fuſcis autem punctulatim inſperſus color albus; venter albicat et mentum inferius; barbam quoque egregie albam habet, conſtantem capillis duos digitos longis et amplius paſſis quaſi ordinatim pexa fuiſſet; quando hæc ſpecies iraſcitur, os ample diducendo et mandibulas celeriter movendo, exagitat hominem; egregie ſaltant, varios fructus comedunt; *Marcgr. Hiſt. Nat. Braſil. p.* 227 *et* 228. Ubi vide figuram.

'are

'are beardleſs. They are of a middle ſize, yet 'extraordinarily fat at the dry ſeaſon, when the 'fruits are ripe; and they are very good meat, 'for we ate of them very plentifully. The In-'dians were ſhy of eating them for a while; 'but they ſoon were perſuaded to it, by ſeeing 'us feed on them ſo heartily. In the rainy ſea-'ſon they have worms in their bowels. I have 'taken a handful of them out of one monkey 'we cut open; and ſome of them ſeven or eight 'feet long. They are a very waggiſh kind of 'monkey, and played a thouſand antick tricks 'as we marched at any time through the woods, 'ſkipping from bough to bough, with the young 'ones hanging at the old ones backs, making 'faces at us, chattering, and, if they had oppor-'tunity, piſſing down purpoſely on our heads. 'To paſs from top to top of high trees, whoſe 'branches are a little too far aſunder for their 'leaping, they will ſometimes hang down by 'one another's tails in a chain; and ſwinging 'in that manner, the lowermoſt catches hold of 'a bough of the other tree, and draws up the 'reſt of them*.' All theſe facts, even the worms in the inteſtines, correſpond with our coaitas. M. Daubenton, in diſſecting theſe animals, found a great number of worms, ſome of which were from twelve to thirteen inches long. It is obvious, therefore, that the exquima of Marcgrave is

* Dampier's Voyages, vol. iii. p. 330.

a ſapajou

a ſapajou of the ſame ſpecies, or, at leaſt, of a ſpecies very nearly allied to that of the coaita.

We muſt likewiſe remark, that, if the animal mentioned by Linnæus, under the name of *Diana**, is really, as he ſays, the *exquima* of Marcgrave, he has omitted the *prehenſile tail*, which is the moſt eſſential character, and ought alone to determine whether this *Diana* belongs to the genus of *ſapajous* or to that of the *monkeys*; and, of courſe, whether it is found in the Old or the New Continent.

Independent of this variety, the characters of which are conſpicuous, there are other varieties, though leſs remarkable, in the ſpecies of the coaita. That deſcribed by M. Briſſon had whitiſh hair on all the under parts of the body. But thoſe I have ſeen were entirely black, and had very few hairs on the inferior parts of the body, where the ſkin appeared, and was equally black with the hair. Of the two coaitas mentioned by Mr. Edwards†, the one was black and

* Diana ſimia caudata barbata, fronte barbaque faſtigiata. Cercopithecus barbatus Guineenſis, Marcgravii.——Habitat in Guinea, magnitudo felis majoris; nigra punctis albidis. Dorſum poſtice ferrugineum, femor ſubtus helvola, gula pectuſque alba, frons pilis erectis albis faſtigiatas, linea tranſverſa in formam lunæ creſcentis, barba faſtigiatas nigra ſubtus alba inſidens tuberi adipoſo, linea alba ab ano ad genua ab exteriori latere femorum ducta. Ludibunda omnia dejicit, peregrinos nutitando ſalutat, irata ore hiat maxillaſque exagitat; vocata reſpondet *greck*; *Linn. Syſt. Nat. p.* 38.

† Gleanings, p. 222.

the

the other brown. On account of the length and ſlenderneſs of their legs and tail, they were called *ſpider monkeys*.

Some years ago, a coaita was ſent me, under the denomination of *chamek*, which, I was told, came from the coaſt of Peru. I ſhall give a deſcription of it in the margin*, from which it will appear that this chamek of Peru, with the exception of a few varieties, is the ſame animal with the coaita of Guiana.

Theſe ſapajous are very dexterous and intelligent. They go in companies, and mutually warn and aſſiſt each other. It uſes its tail as a fifth hand, and ſeems to employ this inſtrument more than either its hands or feet†. To balance this

* This animal was brought from the coaſt of Bancet in Peru, when thirteen months old. It weighed about ſix pounds. The whole body was black. The ſkin of the face was naked, of a coarſe grain, and of the colour of a Mulatto. The hair was coarſe, and from two to three inches in length. The ears, which reſembled thoſe of man, were naked, and of the ſame colour with the face. The tail was one foot ten inches long, five inches thick at the baſe, and about one inch at the point. It was round, and garniſhed with hair above and below about thirteen inches from the origin, but naked below nine inches from the extremity, where the under part of it is flat and furrowed in the middle, and round above. This animal ſuſpends itſelf by the tail, and likewiſe uſes it as a fifth hand to lay hold of any thing it wants. Its length was thirteen inches from the point of the noſe to the origin of the tail. It had only two paps, placed nearly under the armpits.

† This creature has no more than four fingers to each of its fore paws, but the top of the tail is ſmooth underneath, and on this

this advantage, Nature has deprived this animal of a thumb. We are aſſured that it ſeizes fiſhes with its tail; which is by no means incredible; for we have ſeen one of our coaitas lay hold in this manner of a ſquirrel, which had been put into its chamber as a companion. They have the addreſs to break the ſhells of oyſters, in order to eat them *. It is certain, that, with a view to paſs from one tree to another, whoſe branches are too diſtant for a leap, they form a chain, by hanging down †, linked to each other by their tails, and ſwinging in that manner till the loweſt catches hold of a branch, and draws up the reſt. They ſometimes paſs rivers by the ſame expe-

this it depends for its chief actions; for the creature holds every thing by it, and ſlings itſelf with the greateſt eaſe from every tree and poſt by its means.——It is a native of the main continent; and a part of the food of the Indians; *Ruſſel, Hiſt. of Jamaica, chap.* v. *ſect.* 5.

* At the iſland of Gorgonia, on the coaſt of Peru, we took notice of ſeveral monkeys, who lived partly upon oyſters, which they got out of the ſea at low water. Their way was, to take up an oyſter, and lay it upon a ſtone, and with another ſtone to keep beating of it till they had broke the ſhell in pieces; *Dampier's Voyages, vol.* iii. *p.* 382.

† In travelling to Panama, I ſaw, at Capira, one of theſe monkeys leap from one tree to another, which was on the oppoſite ſide of the river. When they want to reach a place which they cannot accompliſh by one leap, they link themſelves to each other's tail, and by this means form a long chain. They then ſpring forward, and the firſt, being aided by the impulſe of the reſt, reaches the intended branch; and, after fixing himſelf, he continues to aſſiſt the progreſs of the others till the whole attain their end; *Hiſt. Nat. du Indes, par Joſeph Acoſta, p.* 200.

dient.

dient. The females bring forth but one or two young, which they always carry on their back. They eat fiſhes, worms, and inſects; but fruits are their common food. When the fruits are ripe, they become very fat, and their fleſh is then ſaid to be excellent *.

Diſtinctive Characters of theſe Species.

The coaita has neither cheek pouches nor calloſities on the buttocks. He has a very long, prehenſile tail. The partition of the noſtrils is very thick, and their apertures are placed at a ſide, and not under the noſe. He has only four fingers on his hands or fore feet. Both his hair and ſkin are black. His face is naked and tawny. His ears are alſo naked, and reſemble thoſe of man. He is about a foot-and a half in length; and his tail is longer than the body and head together. He walks on four feet.

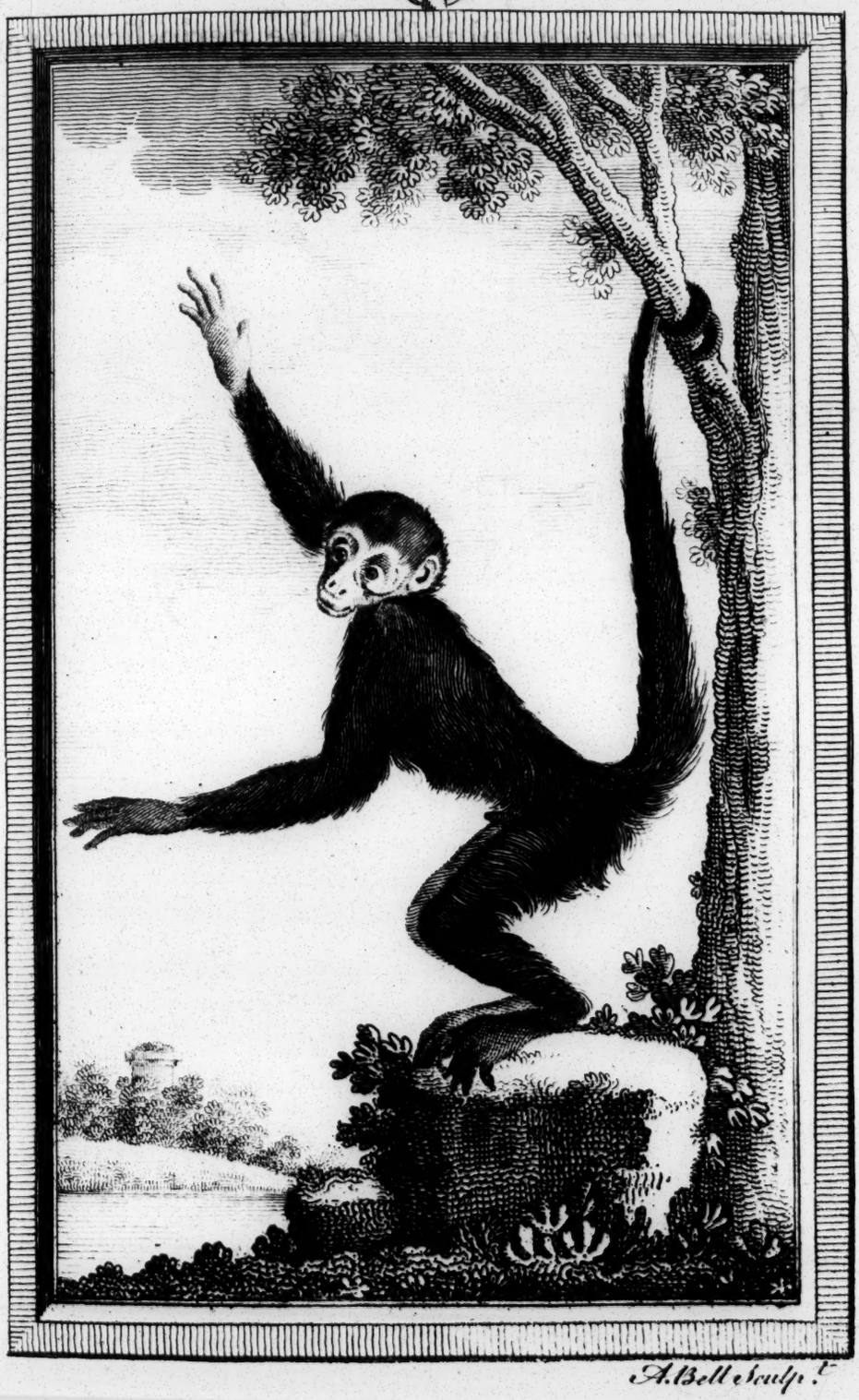
The exquima is nearly of the ſame ſize with the coaita, and has likewiſe a prehenſile tail. But his colour, inſtead of being black, is variegated. The hairs on his back are black and yellow, and white on the throat and belly. He has, beſides, a remarkable beard. Theſe differ-

* They are of a middle ſize, yet extraordinarily fat at the dry ſeaſon, when the fruits are ripe; and they are very good meat, for we ate of them very plentifully; *Dampier's Voyages*, *vol.* iii. *p.* 330.

ences,

ences, however, are not ſufficient to conſtitute two diſtinct ſpecies; eſpecially as ſome coaitas are not entirely black, but are whitiſh on the throat and belly. The females of theſe two ſpecies are not ſubject to the periodical evacuation.

Plate CCLXXXIII.

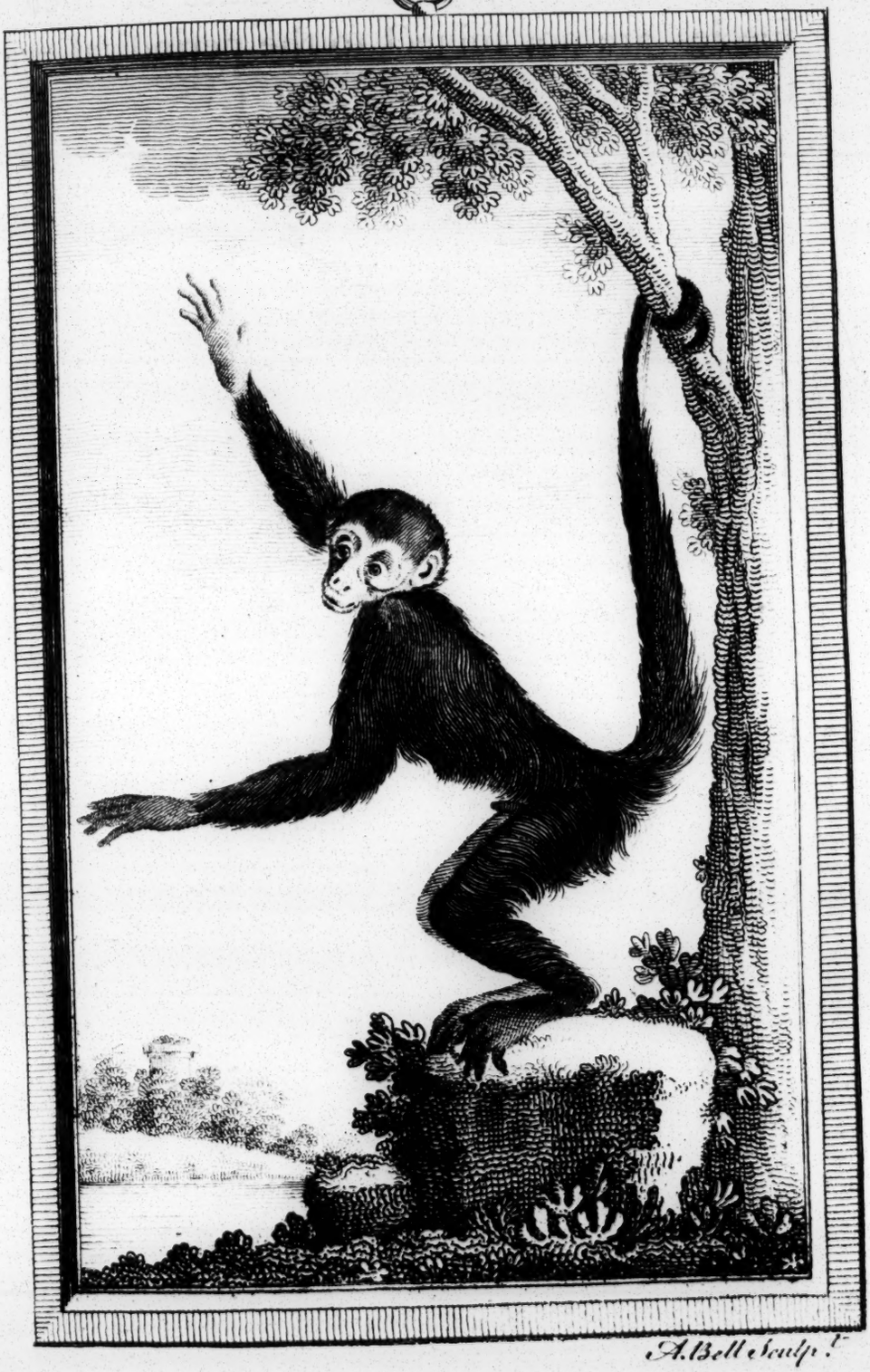


A. Bell Sculp.t

COAITA.

ences, however, are not ſufficient to conſtitute two diſtinct ſpecies; eſpecially as ſome coaitas are not entirely black, but are whitiſh on the throat and belly. The females of theſe two ſpecies are not ſubject to the periodical evacuation.

Plate CCLXXXIII.



A. Bell Sculp.t

COAITA.



The SAJOU*, or Capuchin Monkey.

WE are acquainted with two varieties of this ſpecies, the *brown ſajou*, or capuchin monkey; and the *grey ſajou*, which differs from the brown in colour only. They are

* The capuchin monkey, with a round head, and a ſhort fleſh-coloured face, with a little down on it; hair on the forehead more or leſs high and erect in different ſubjects; top of the head black and duſky, hair on it pretty long; hind part of the neck, and middle of the back, covered with long duſky hairs; reſt of the back and the limbs of a reddiſh brown; hands and feet covered with a large ſkin; tail longer than the head and body, and often carried over the ſhoulders; the hair on it very long, of a deep brown colour, and appears very buſhy from beginning to end: It is a ſpecies that varies a little in colours, which induced Linnæus to form three ſpecies of this one; *Pennant's Synopſ. of Quad. p.* 126.

Sajou, a word abridged from *cayouaſſou* or ſajouaſſou, the name of theſe animals in Maragnon.

Simia trepida, caudata, imberbis, capillitio arrecto, manibus pedibuſque cæruleis, cauda prehenſili villoſa; *Linn. Syſt. Nat. p.* 139.

Simia capucina, caudata, imberbis, fuſca, cauda prehenſili hirſuta, pileo artubuſque nigris, natibus tectis; *Linn. Syſt. Nat. p.* 42.

Simia apella, caudata, imberbis, cauda ſubprehenſili, corpore fuſco, pedibus nigris, natibus tectis; *Ibid.*

Cercopithecus fuſcus, capitis vertice fuſco; *Briſſon. Quad. p.* 137.

Buſh-tail monkey; *Edw. p.* 312.

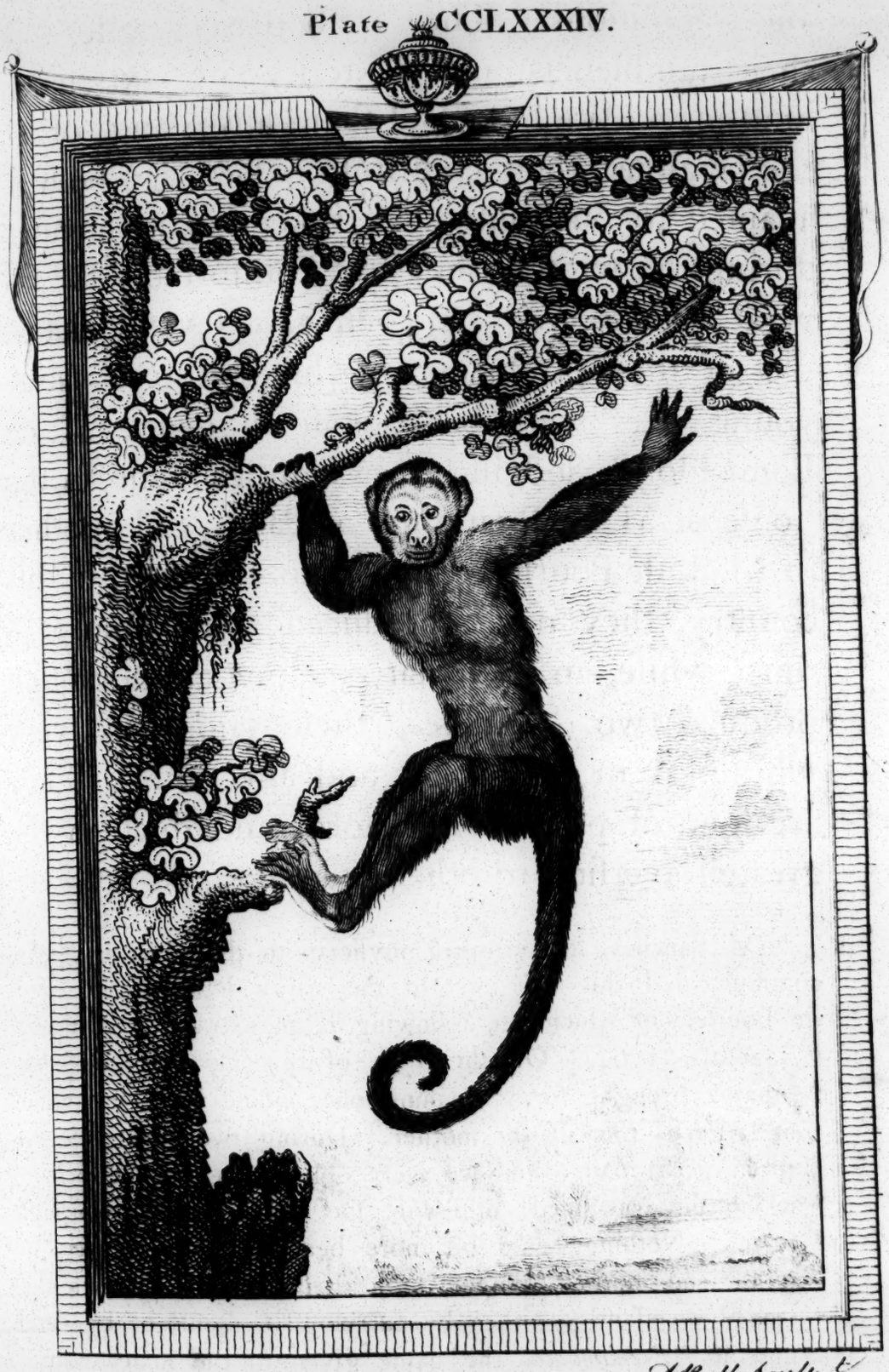
Simiolus Ceylonicus; *Seb. Muſ. tom.* i. *p.* 77. *tab.* 48. This animal is not found in Ceylon, but in America.

Cayouaſſou; *Miſſ. du P. d'Abbeville, p.* 252.

both of the ſame ſize, and have the ſame figure and diſpoſitions. They are both very agile, and their nimbleneſs and dexterity are extremely amuſing. We have had them alive, and, of all the ſapajous, their conſtitution ſeems to be beſt adapted to our climate. If kept in a chamber during the winter, they live comfortably for ſeveral years. We can even give ſeveral examples of their producing in this country. Two young ones were brought forth in the M. de Pompadour's lodging at Verſailles; one in the houſe of M. de Reaumur, at Paris, and another in Mad. de Pourſel's, in Gatinois*. But, in this country, they never produced above one at a time, while, in their native climate, they often produce two. Beſides, theſe ſajous are very whimſical in their taſte and affections. They are fond of particular perſons, and diſcover the greateſt averſion to others.

* M. Sanches, formerly firſt phyſician to the court of Ruſſia, communicated this laſt fact to me, in a letter from Mad. de Pourſel, of which the following is an extract: 'Bordeaux, 'Jan. 26, 1764. On the 13th of this month, the female 'ſapajou brought forth a young one, whoſe head was almoſt 'as large as that of the mother. During two hours, ſhe ſuf-'fered great pain; and we were obliged to cut the belt by 'which ſhe was fixed, otherwiſe ſhe could not have brought 'forth. Nothing could be more beautiful than to ſee the 'father and mother occupied with their little one, which they 'teazed inceſſantly, either by carrying it about, or by careſ-'ſing it. *Fernambuco*, the name given to the male, becauſe 'he was brought from that part of Braſil, loves his child to 'diſtraction. The father and mother carry it alternately; 'and, when it does not hold properly, they give it a pretty 'ſevere bite.'

Plate CCLXXXIV.



A. Bell Sculp.t

BROWN CAPUCHIN MONKEY.

both of the ſame ſize, and have the ſame figure and diſpoſitions. They are both very agile, and their nimbleneſs and dexterity are extremely amuſing. We have had them alive, and, of all the ſapajous, their conſtitution ſeems to be beſt adapted to our climate. If kept in a chamber during the winter, they live comfortably for ſeveral years. We can even give ſeveral examples of their producing in this country. Two young ones were brought forth in the M. de Pompadour's lodging at Verſailles; one in the houſe of M. de Reaumur, at Paris, and another in Mad. de Pourſel's, in Gatinois*. But, in this country, they never produced above one at a time, while, in their native climate, they often produce two. Beſides, theſe ſajous are very whimſical in their taſte and affections. They are fond of particular perſons, and diſcover the greateſt averſion to others.

* M. Sanches, formerly firſt phyſician to the court of Ruſſia, communicated this laſt fact to me, in a letter from Mad. de Pourſel, of which the following is an extract: 'Bordeaux, 'Jan. 26, 1764. On the 13th of this month, the female 'ſapajou brought forth a young one, whoſe head was almoſt 'as large as that of the mother. During two hours, ſhe ſuf-'fered great pain; and we were obliged to cut the belt by 'which ſhe was fixed, otherwiſe ſhe could not have brought 'forth. Nothing could be more beautiful than to ſee the 'father and mother occupied with their little one, which they 'teazed inceſſantly, either by carrying it about, or by careſ-'ſing it. *Fernambuco*, the name given to the male, becauſe 'he was brought from that part of Braſil, loves his child to 'diſtraction. The father and mother carry it alternately; 'and, when it does not hold properly, they give it a pretty 'ſevere bite.'

Plate CCLXXXIV.



A. Bell Sculp.t

BROWN CAPUCHIN MONKEY.



Plate CCLXXXV.



A. Bell Sculpt.

GRAY CAPUCHIN MONKEY.

BL

We remarked a ſingularity in theſe animals, which makes the females be often miſtaken for the males. The clitoris is prominent, and appears to be as large as the penis of the male.

Diſtinctive Characters of this Species.

The ſajous have neither cheek-pouches, nor calloſities on their buttocks. Their face and ears are fleſh-coloured, with a little down above. The partition of the noſtrils is thick, and their apertures are placed at a ſide, and not under the noſe. The eyes are cheſnut coloured, and ſituated near each other. The tail is prehenſile, naked below at the point, and very buſhy everywhere elſe. In ſome, the hair is black and brown, both round the face, and upon all the upper parts of the body. In others, the hair round the face is grey, and of a browniſh yellow on the body. The hands are always black and naked. From the point of the muzzle to the origin of the tail, they exceed not a foot in length. They walk on four feet. The females are not ſubject to the menſes.

The SAI*, or WEEPER.

WE have ſeen two varieties of this ſpecies; the firſt was of a blackiſh brown colour; and the ſecond, which I have called *ſai with a white throat*, has white hair on the breaſt, throat, and round the ears and cheeks. It differs from the firſt by having leſs hair on the face; but, in every other article, they perfectly reſemble each other. Their diſpoſitions, ſize, and figure, are the ſame. Travellers have mentioned theſe animals under the name of *weepers* †; becauſe they make a plaintive noiſe, and, when irritated, have the appearance of crying. Others have called them *muſk monkeys*,

* *Cay*, pronounced *ſai*, the Braſilian name of this animal.

Monkey with a round and flat face, with a reddiſh brown colour, very deformed; the hair on the head and upper part of the body black, tinged with brown; beneath, and on the limbs, tinged with red; tail black, and much longer than the head and body: The young are exceſſively deformed; their hair very long, and thinly diſperſed; *Pennant's Synopſ. of Quad. p.* 127.

Cercopithecus Braſilienſis ſecundus; *Cluſ. Exot. p.* 372.

Cay; *De Laet, p.* 486. *Raii Syn. Quad. p.* 155.

Cercopithecus totus niger; *Briſſon. Quad. p.* 139.

† In the iſland of St. George, two leagues diſtant from the continent of America, there are monkeys called *weepers*, becauſe they imitate the cries of an infant; *Voyage de la Gentil, tom.* i. *p.* 15.

becauſe,

becauſe, like the maucauco, they have a muſky odour*. Others have given them the name of *macaque* †, which they borrowed from the macaque of Guiney. But the macaques are monkeys with flaccid tails; while the former belong to the ſapajous, becauſe their tails are prehenſile. The females have only two paps, and produce two young at a time. They are mild, docile, and ſo timid, that their common cry, which reſembles that of a rat, becomes a kind of groaning when they are threatened with danger. In this country, they eat May-bugs and ſnails ‡ in preference to all other food. But, in Braſil, their native climate, they live chiefly on grains and wild fruits ||, which they gather from the trees, and rarely deſcend upon the earth.

Diſtinctive

* In the neighbourhood of the Bay of All Saints, there are ſmall monkeys, who are extremely ugly, and have a great ſcent of muſk; *Dampier's Voyages.*

† At the Bay of All Saints, I ſaw two ſpecies of monkeys, the one called *ſagouins*, and the other *macaques*. The ſagouins are of the ſize of a ſquirrel. Some of them are grey, and others of a fine yellow colour. They are extremely beautiful.—The macaques are larger, and of a brown colour; they weep perpetually, &c.; *Voyages de de Gennes, par Froger, p.* 150.

‡ All the monkeys of South America live upon fruits, flowers, and particular inſects; *Hiſt. des Avanturiers, par Oexmelin, tom.* ii. *p.* 256.

|| The cais or ſais never remove from the top of a tree that bears fruit in a pod as large as our beans, which is their principal food. They aſſemble in troops, and particularly when it rains. It is pleaſant to hear them chattering on the trees. The female produces but one at a time; and the young,

Diſtinctive Characters of this Species.

The ſais have neither cheek-pouches nor calloſities on their buttocks. The partition of their noſtrils is very thick, and the apertures are placed at a ſide, not under the noſe. The face is round and flat, and the ears are almoſt naked. The tail is prehenſile, and naked below toward its extremity. Upon the upper parts of the body, the hair is of a blackiſh brown colour, and on the inferior parts, of a pale yellow or dirty white. Theſe animals exceed not fourteen inches in length; and their tail is longer than both body and head. They walk on four feet. The females are not ſubjected to the menſes.

as ſoon as brought forth, holds firm by the neck of its mother or father. When purſued by the hunters, they ſave themſelves by leaping from branch to branch, carrying their young on their backs. The ſavages, therefore, being unable to ſeize either the young or the old, are obliged to wound them with arrows; after which they fall from the tops of the trees, either ſtunned or wounded. When cured of the wounds, and rendered ſomewhat tame, they are ſold by the ſavages; for, when firſt taken, they are ſo ferocious, and bite ſo obſtinately, that they quit not their hold till they be torn in pieces; *Voyage de Lery, p.* 164.

Plate CCLXXXVI.



A. Bell Sculp.t

SAI or WEEPER.

Plate CCLXXXVII.



A. Bell Sculpt.

SAI with a WHITE THROAT

B L

The SAIMIRI*, or Orange Monkey.

THE ſaïmiri is commonly known by the name of the *golden*, *orange*, or *yellow ſapajou*. It is common in Guiana; and therefore has received from ſome voyagers the appellation of the *Cayenne ſapajou*. From the gracefulneſs of its movements, the ſmallneſs of its ſize, the brilliant colour of its hair, the largeneſs and vivacity of its eyes, and its round viſage, the ſaïmiri has uniformly been preferred to all the other ſapajous: it is indeed the moſt beautiful of this tribe. But it is likewiſe the

* Orange monkey, with a round head, noſe a little pointed, and the end of it duſky; orbits fleſh-coloured; ears hairy; hair on the body ſhort and fine, of a yellow and brown colour; but, in its native country, when in perfection, of a brilliant gold colour; the feet orange; nails of the hands flat, of the feet like claws; tail very long, and leſs uſeful for prehenſile purpoſes than that of the reſt; body of the ſize of a ſquirrel; *Pennant's Synopſ. of Quad. p.* 128.

Caymiri, or *ſaimiri*, the name of this animal in the country of Maragnon.

Caitaia; *Marcgr. p.* 227. *Raii Synopſ. Quad. p.* 175.

Cercopithecus pilis ex fuſco flaveſcente, et caudicante variegatus, veſtitus, pedibus ex flavo rufeſcentibus; *Briſſon. Quad. p.* 140.

Cercopithecus minor luteus; le ſapajou jaune; *Barrère, Franc. Equin. p.* 151.

Simia ſciurea, caudata, imberbis, occipite prominulo, unguibus quatuor plantarum ſubulatis, natibus tectis; *Linn. Syſt. Nat. p.* 43.

moſt delicate*, and the moſt difficult to tranſport and preſerve. From theſe characters, and particularly from that of the tail, which is only half-prehenſile, and, though not ſo muſcular as that of the ſapajous, is not abſolutely uſeleſs and flaccid, the ſaïmiri ſeems to form the ſhade between the ſapajous and the ſagoins.

Diſtinctive Characters of this Species.

The ſaïmiri has neither cheek-pouches nor calloſities on the buttocks. The partition of his noſtrils is thick, and their apertures are placed at a ſide, not under the noſe. He may be ſaid to have no forehead. His hair is of a brilliant yellow colour; and he has two fleſh-coloured rings round his eyes. His noſe is elevated at the baſe, and flattened at the point. The mouth is ſmall, the face is flat and naked; and the ears are garniſhed with hair, and a little pointed. The tail is half prehenſile, and longer than the body. From the point of the muzzle to the origin of the tail, he exceeds not ten or eleven inches in length. He ſtands with eaſe on his two hind legs; but he commonly walks on four. The female is not ſubject to the menſes.

* The Cayenne ſapajou is a yellowiſh monkey. It has large eyes, a white face, a black chin, and a ſlender frame. It is alert and careſſing; but it is equally injured by cold as the ſagoins of Braſil; *Relat. du Voyage de Gemes, par Froger, p.* 163.

Plate CCLXXXVIII.



A. Bell Sculp.t

SAMIRI or ORANGE MONKEY.

BL

The SAKI*, or Fox-tailed Monkey.

THE ſaki, which is commonly called the *fox-tailed monkey*, becauſe its tail is garniſhed with very long hair, is the largeſt of the ſagoins. When full grown, it is about ſeventeen inches long; but the largeſt of the other five ſpecies exceeds not nine or ten. The hair on the body of the ſaki is very long, and that on the tail is ſtill longer. His face is reddiſh, and covered with a whitiſh down. He is eaſily diſtinguiſhed from all the other ſagoins, ſapajous, and monkeys, by the following characters:

* Fox-tailed monkey, with a ſwarthy face, covered with ſhort down; forehead and ſides of the face with whitiſh and pretty long hair; body with long duſky brown hairs, white or yellowiſh at their tips; hair on the tail very long and buſhy, ſometimes black, ſometimes reddiſh; belly and lower part of the limbs a reddiſh white. Length from noſe to tail near a foot and a half, tail longer, and like to that of a fox: Hands and feet black, with claws inſtead of nails; *Pennant's Synopſ. of Quad. p.* 130.

Saki. Simia minima, capite albido, dorſo fuſco, pone rufeſcente, cauda crinita. Sakee Winkee; *Brown's Nat. Hiſt. of Jamaica, chap.* v. *ſect.* 5.

Cagui major Braſilienſibus; *Marcgr. p.* 227.

Cercopithecus pilis nigris, apice albido, veſtitus, cauda pilis longiſſimis nigris obſita; *Briſſon. Quad. p.* 138. 141.

Simia pithecia, caudata, imberbis, vellere nigro, apice albo, cauda nigra, villoſiſſima; *Linn. Syſt. Nat. p.* 40.

Saccawinkee; *Bancroft's Guiana, p.* 135.

Diſtinctive

Diſtinctive Characters of this Species.

The ſaki has neither cheek-pouches nor calloſities on his buttocks. His tail is flaccid, not prehenſile, and one half longer than both head and body. The partition of the noſtrils is very thick, and the apertures placed at a ſide. The face is tawny, and covered with a fine, ſhort, whitiſh down. The hair on the upper parts of the body is blackiſh brown, and that on the belly and other inferior parts is reddiſh white. The hair on the body is ſtill longer than that on the tail, beyond the point of which it hangs near two inches. The hair on the tail is generally blackiſh brown, like that on the body. This ſpecies ſeems to vary in colour. Some ſakis have the hair both on the body and tail of a reddiſh yellow colour. This animal walks on four feet, and is near a foot and a half in length. The females are not ſubjected to the periodical evacuation.

Plate CCLXXXIX.



SAKI or FOX TAILD MONKEY.

BL

The TAMARIN *, or Great-eared Monkey.

THIS ſpecies is much ſmaller than the preceding, and differs from it in ſeveral characters. The tail of the tamarin is covered with ſhort hair, but that of the ſaki is garniſhed with hair remarkably long. The tamarin has alſo large ears, and yellow feet. It is a beautiful animal †, very lively, and eaſily tamed; but ſo

* Great-eared monkey, with a round head, and a ſwarthy, fleſh-coloured, naked face; upper lip a little divided; ears very large, erect, naked, and almoſt ſquare; hair on the forehead upright and long; on the body, ſoft, but ſhaggy: The head, whole body, and upper part of the limbs, black, except the lower part of the back, which is tinged with yellow; hands and feet covered with light orange-coloured hairs, very fine and ſmooth; nails long and crooked; tail black, and twice the length of the body; teeth very white; *Pennant's Synopſ. of Quad. p.* 131.

Cercopithecus minimus niger leontocephalus, auribus elephantinis; *Barrère Franc. Equin. p.* 151.

Simia midas, caudata, imberbis, labio ſuperiore fiſſo, auribus quadratis nudis, unguibus ſubulatis, pedibus croceis; *Linn. Syſt. Nat. p.* 42.

The little black monkey; *Edwards's Hiſt. of Birds, p.* 196.

Tamarin, the name of this animal in Cayenne; *Binet, p.* 341.

† In Cayenne, there are very ſmall monkeys called *tamarins*, which are extremely beautiful. They exceed not the ſize of a ſquirrel, and have the head and face of a lion, ſmall teeth as white as ivory, and arranged with great ſymmetry. They are black, with yellowiſh ſpots on the ſhoulders. The pats are

ſo delicate, that it cannot long reſiſt the inclemency of our climate.

Diſtinctive Characters of this Species.

The tamarin has neither cheek-pouches nor calloſities on the buttocks. The tail is flaccid, and twice the length of the body and head. The partition between the noſtrils is very thick, and the apertures are placed at a ſide. The face is of a duſky fleſh-colour. The ears are ſquare, large, naked, and of the ſame colour; and the eyes are cheſnut. The upper lip is divided nearly like that of the hare. The head, body, and tail, are covered with ſoft, blackiſh-brown hair, and the hands and feet with ſhort orange coloured hair. The body and limbs are finely proportioned. This animal walks on four feet; and the head and body together exceed not ſeven or eight inches in length. The females are not ſubject to the menſes.

are like thoſe of the monkey, and orange coloured. They are very familiar and playſome; *Voyage à Cayenne, par Antoine Binet, p.* 341.

Plate CCXC.



A Bell Sculpt.

TAMARIN or GREAT EARD MONKEY.

BL

The OUISTITI*, or Striated Monkey.

THE ouiſtiti is ſtill ſmaller than the tamarin, both the head and body not exceeding half a foot in length. His tail is more than a foot long, and, like that of the maucauco, marked with alternate rings of black and white; the hair on the tail is ſtill ſtronger, and more buſhy than that of the maucauco. The face of the ouiſtiti is naked, and of a dark fleſh-colour.

He

* *Ouiſtiti*, a ſound articulated by this animal, and which we have adopted for its name.

The ſtriated monkey, with a very round head. About the ears are two very full tufts of white hairs ſtanding out on each ſide; irides reddiſh; face a ſwarthy fleſh-colour; ears like the human; head black; body aſh-coloured, reddiſh, and duſky, the laſt forms ſtriated bars croſs the body; tail full of hair, annulated with aſh-colour and black; body ſeven inches long; tail near eleven; hands and feet covered with ſhort hairs; fingers like thoſe of a ſquirrel; nails or rather claws ſharp; *Pennant's Synopſ. of Quad. p.* 132.

Galeopithecus, *ſagoin* a Braſilienſibus nominatus; *Geſner. Icon. Quad. p.* 96.

Sagouy; *Miſſion au Maragnon, par le P. d'Abbeville, p.* 252.

Cagui minor; *Marcgr. Hiſt. Nat. Braſil. p.* 227.

Cercopithecus Braſilianus tertius, *ſagouin*; *Cluſ. Exot. p.* 372. *Geſner. Quad. p.* 869. *Raii Synopſ. Quad. p.* 154. *Klein. Quad. p.* 87. *tab.* 3. *Ludolph. Com. Æthiop. p.* 58.

Cercopithecus teniis tranſverſis alternatim fuſcis, et e cinereo albis variegatus, auriculis pilis albis circumdatis; *Briſſon, Quad. p.* 143.

Simia

He has two tufts of long white hair before his ears, which conceal them when we look the animal in the face. Mr. Parſons has given a good deſcription of this animal in the Philoſophical Tranſactions *; and Mr. Edwards, in his Gleanings, has given an excellent figure of it. He remarks, that, of ſeveral he ſaw, the largeſt weighed not above ſix ounces, and the ſmalleſt only four and a half; and judiciouſly adds, That the ſuppoſition that the ſmall Æthiopian monkey mentioned by Ludolph, under the denomination of *fonkes*, or *guereza*, was the ſame animal with the ouiſtiti, has no foundation †. It is certain, that neither the ouiſtiti, nor any other ſagoin, exiſts in Æthiopia; and the *fonkes* or *guereza* of Ludolph is probably the *maucauco* or *loris*, which are common in the ſouthern regions of the Old Continent. Mr. Edwards farther remarks, that, when the ouiſtiti is in good health, its hair is very buſhy; that one of thoſe he ſaw,

Simia Jaccus, caudata, auribus villoſis patulis, cauda hirſutiſſima, curvata, unguibus ſubulatis, pollicum rotundatis: *Linn. Syſt. Nat. p.* 40.

* Phil. Tranſ. vol. xlvii. p. 146.

† J. Ludolphus, in his Hiſtory of Æthiopia or Abyſſinia, hath given two figures of this animal. They are deſcribed, p. 58. in the Engliſh tranſlation of that work. He calls it *fonkes*, or *guereza*; but his deſcription doth not agree at all with the figures: So that I imagine this was met with in Holland, and ſuppoſed to be the little monkey deſcribed by Ludolphus, though it was really brought from Braſil, which was poſſeſſed by the Hollanders at the time of the publication of that hiſtory; *Edwards's Gleanings, p.* 16.

which

which was very vigorous, fed upon ſeveral things, as biſcuits, fruits, pot-herbs, inſects, and ſnails; that one day being unchained, it darted upon a ſmall gold-fiſh that was in a baſin, which it killed and devoured with avidity; and that afterwards ſmall eels were preſented to it, which, at firſt, frighted it, by twiſting round its neck; but that it ſoon overcame and ate them. Mr. Edwards ſubjoins a fact, which proves that theſe ſmall animals might be multiplied in the ſouthern parts of Europe: He tells us, that they produced young in Portugal, where the climate is favourable to them. They are at firſt very ugly, having hardly any hair on their bodies; and they adhere firmly to the teats of the mother. When they have become a little larger, they fix themſelves upon her back or ſhoulders; and, when ſhe is fatigued by carrying them, ſhe rubs them off againſt a wall, and the father inſtantly allows them to mount upon his back, in order to aſſiſt the mother *.

Diſtinctive Characters of this Species.

The ouiſtiti has neither cheek-pouches nor calloſities on the buttocks. His tail is flaccid, very buſhy, annulated with alternate bars of black and white, or rather of brown and gray, and twice as long as the head and body. The

* Edwards's Gleanings, p. 17.

partition

partition of the noſtrils is very thick, and the apertures are placed at a ſide. The head is round. The top of the front is covered with black hair; and above the noſe there is a white ſpot without hair. The face is likewiſe almoſt naked, and of a deep fleſh colour. On each ſide of the head, before the ears, is a tuft of long white hairs. The ears are roundiſh, flat, thin, and naked. The eyes are of a reddiſh cheſnut colour. The body is covered with gray aſh-coloured hair, interſperſed with a little yellow on the throat, breaſt, and belly. He walks on four feet; and often exceeds not half a foot in length. The females do not menſtruate.

Plate CCXCI.



A Bell sculpt.

OISTITI or STRIATED MONKEY.

B L

The MARIKINA*, or Silky Monkey.

THE marikini is commonly diſtinguiſhed by the name of the ſmall *lion-ape*. We reject this compound denomination, becauſe the marikini is not an ape, but a ſagoin. Beſides, he has no more reſemblance to a lion than a lark has to an oſtrich, there being no other relation between them than a kind of mane round the face of the marikina, and a tuft of hair at the end of his tail. His hair is long, ſilky, and vivid. He has a round head, a brown face, red eyes, and round naked ears, concealed under the long hairs which ſurround his face: Theſe hairs are

* *Marikina*, the name of this animal in Maragnon; *Miſſion. du P. d'Abbeville, p.* 252.

The ſilky monkey, with a flat face, of a dull purple colour; ears round and naked; on the ſides of the face the hairs very long, turned backwards, of a bright bay colour; ſometimes yellow, and the former only in patches; the hair on the body long, very fine, ſilky, gloſſy, and of a pale bright yellow; hands and feet naked, and of a dull purple colour; claws inſtead of nails to each finger; length of the head and body ten inches; tail thirteen and a half, a little buſhy at the end; *Pennant's Synopſ. of Quad. p.* 133.

Cercopithecus minor dilute olivaceus, parvo capite, *Acarima* à Cayenne; *Barrère Franc. Equin. p.* 151.

Cercopithecus ex albo flavicans, faciei circumferentia ſaturate rufa; le petit ſinge-lion; *Briſſon. Quad. p.* 142.

Simia roſalia, caudata, imberbis, capite piloſo, faciei circumferentia pedibuſque rubris, unguibus ſubulatis; *Linn. Syſt. Nat. p.* 41.

of a bright red colour, and thoſe on the body and tail are pale yellow, almoſt white. This animal has the ſame manners, the ſame vivacity, and the ſame inclinations with the other ſagoins. Its conſtitution ſeems to be more robuſt; for we have ſeen one that lived five or ſix years in Paris, without any other precaution than keeping it during the winter in a warm room.

Diſtinctive Characters of this Species.

The marikina has neither cheek-pouches nor calloſities on the buttocks. His tail is flaccid, or not prehenſile, and almoſt twice as long as both the head and body. He has round naked ears, long reddiſh hairs around the face, and bright yellowiſh white hairs, nearly of an equal length on the reſt of the body, with a conſiderable tuft at the extremity of the tail. He walks upon four feet; and exceeds not eight or nine inches in length. The female is not ſubject to the menſes.

Plate CCXCII.



A. Bell sculp.t

MARIKINI or SILKY MONKEY.

B L

The PINCHE*, or Red-tailed Monkey.

THE pinche, though very ſmall, is larger than either the ouiſtiti or the tamarin. Including head and body, it is about nine inches long, and the length of the tail is, at leaſt, eighteen inches. It is rendered remarkable by a kind of ſmooth white hair upon the top and ſides of the head, eſpecially as this colour is wonderfully contraſted by that of the face, which is black, and interſperſed with a grey down. The eyes are black, and the tail, from its origin to near the middle, is of a lively red, where it changes to a browniſh black, which continues

* *Pinche*, the name of this animal at Maynas; *Condamine's Voy. p.* 83.

Red-tailed monkey with a round head and black pointed face; ears round and duſky; hair on the head white, long, and ſpreading over the ſhoulders: The ſhoulders and back are covered with long and looſe brown hairs; rump and half the tail deep orange coloured, almoſt red; the remaining part black; the throat black; breaſt, belly, and legs white; inſides of the hands and feet black; claws crooked and ſharp; length of the head and body eight inches; tail above twice as long; *Pennant's Synopſ. of Quad. p.* 134.

Cercopithecus pilis ex fuſco et ruſo veſtitus, facie ultra auriculas uſque nuda et nigra, vertice longis pilis obſita; *Briſſon. Quad. p.* 150.

Simia Oedipus, caudata, imberbis, capillo dependente, cauda rubra, unguibus ſubulatis; *Linn. Syſt. Nat. p.* 41.

The little lion-monkey; *Edwards's Hiſt. of Birds, p.* 195.

to the point. The hair on the ſuperior parts of the body is of a yellowiſh brown colour; that on the breaſt, belly, hands, and feet, is white. The whole ſkin is black. The throat is naked and black, like the face. Though its figure be ſingular, it is a beautiful animal. Its voice is ſoft, and rather reſembles the chanting of a ſmall bird than the cry of a quadruped. It is extremely delicate, and requires great precautions to be tranſported from America to Europe*.

Diſtinctive Characters of this Species.

The pinche has neither cheek-pouches nor calloſities on the buttocks. His tail is not prehenſile, and is more than twice the length of the head and body. The partition of the noſtrils is thick, and the apertures are placed at a ſide. The face, throat, and ears are black; on the head are long white hairs. The muzzle is broad, and the face round. The hair on the body is pretty long, of a yellowiſh brown or reddiſh colour till near the tail, where it becomes

* In Braſil, de Lery remarks, there is a marmot, which the ſavages call *ſagoin*. It exceeds not the ſize of a ſquirrel, and is of the ſame reddiſh colour. Its muzzle reſembles that of the lion. It is one of the moſt beautiful animals I have ever ſeen; and, if it were as eaſily tranſported as the monkey, it would be much more eſteemed. It is ſo delicate, that it cannot endure the motion of a ſhip; and, beſides, it is ſo haughty, that the ſmalleſt affront makes it die with chagrin; *Voyage de Jean de Lery, p.* 163.

orange;

Plate CCXCIII.



A. Bell Sculp.t

PINCHE or RED MONKEY.

BL

orange; on the breaſt, belly, hands, and feet, it is white, and ſhorter than on the body. The tail, from the origin to one half of its length, is a vivid red, then browniſh red, and toward the point it is black. He is about nine inches in length, and walks on four feet. The females are not ſubject to the menſtrual evacuation.

The MICO*, or Fair Monkey.

WE owe our knowledge of this animal to M. de la Condamine; and, therefore, we ſhall tranſcribe the account he has given of it: 'The monkey, of which the Governor of 'Para made me a preſent, is the only one of 'the kind that had been ſeen in this country. 'The hair on its body was of a beautiful ſilvery 'white colour; and that on its tail was a ſhining 'cheſnut approaching to black. Its ears, cheeks, 'and muzzle, were of ſo lively a vermilion, 'that it had the appearance of being the work 'of art. I kept it twelve months; and, when 'almoſt in ſight of the French coaſt, it was 'ſtill alive. But, notwithſtanding all my pre-'cautions to defend it againſt the cold, it fell a 'victim to the rigour of the ſeaſon before my 'arrival. . . . I have preſerved it in aqua-'vitæ, which will be ſufficient to ſhow that

* The fair monkey, with a ſmall round head; face and ears of the moſt lively vermilion colour; body covered with moſt beautiful long hairs of a bright and ſilvery whiteneſs, of matchleſs elegance; tail of a ſhining dark cheſnut; head and body eight inches long; tail twelve; *Pennant's Synopſ. of Quad. p.* 134.

Cercopithecus ex cinereo albus argenteus, facie auriculiſque rubris ſplendentibus, cauda caſtanei coloris; *Briſſon. Quad. p.* 142.

'my

'my deſcription is not exaggerated *.' From this narration it is obvious, that M. de la Condamine's deſcription will apply to no other animal than the *mico;* and that it is a diſtinct, and probably a very rare ſpecies. Though remarkable for the beauty of its hair, and the lively red which adorns its face, it was never mentioned by any former author or traveller.

Diſtinctive Characters of this Species.

The mico has neither cheek-pouches nor calloſities on the buttocks. The tail is about one half longer than the head and body, and is not prehenſile. The partition of the noſtrils is thinner than that of the other ſagoins; but their apertures are placed at a ſide. Its face and ears are naked, and of a vermilion colour. The muzzle is ſhort; the eyes are diſtant from each other; the ears are large; the hair is of a beautiful ſilver white colour, and that of the tail of a gloſſy brown, approaching to black. It walks on four feet, and exceeds not ſeven or eight inches in length. The females are not ſubject to the menſes.

* Voyage ſur la Rivière des Amazones, par M. de la Condamine, p. 165.

NOTICES of ſome Animals which are not expreſsly treated of in the Courſe of this Work.

WE have now finiſhed, according to the extent of our ability, the hiſtory of quadrupeds. But, to render it ſtill more complete, thoſe of which we could not procure an exact knowledge muſt not be paſſed over in ſilence. Their number is ſmall; and even of this ſmall number, ſeveral of them are only varieties of the ſpecies already deſcribed.

NOTICE I.

The WHITE, or POLAR BEAR*.

THE white bear is a famous animal in our moſt northern regions. It is mentioned by Martin, and ſome other voyagers. But none of

* Polar bear, with long head and neck; ſhort round ears; end of the noſe black; vaſt teeth; hair long, ſoft, white, and tinged in ſome parts with yellow; limbs of great ſize and ſtrength.

Plate CCXCIV.



A Bell Sculp.

MICO or FAIR MONKEY

BL

of their deſcriptions are ſo complete as to enable us to aſcertain whether it differs in ſpecies from the common bear. If what they have ſaid, however, be exact, it is probably a diſtinct ſpecies. But, as we know that the wolf varies in different climates, ſome of them being black, others brown, others white, and others variegated, colour is a character of no value in conſtituting different ſpecies. I ſaw two ſmall bears which had been brought from Ruſſia, and were entirely white*; and yet they were unqueſtionably of the ſame ſpecies with our Alpine bears. Theſe animals likewiſe vary greatly in ſize. As they live long, and become very thick and fat in places where they have plenty of nouriſhment, and are not diſturbed, the character drawn from magnitude is equivocal. Hence we are not authoriſed to conclude, that the bear of the northern ſeas is a peculiar ſpecies, ſolely becauſe he

ſtrength. It grows to a vaſt ſize, the ſkins of ſome being thirteen feet long; *Pennant's Synopſ. of Quad. p.* 192.

White bear; *Martin's Spitzbergen, p.* 100. *Egede, Greenl. p.* 59. *Ellis's Voy. p.* 41. *Crantz, Greenl. vol.* i. *p.* 73. *Barentz's Voy. p.* 18 *and* 45. *La Hontan's Voy. vol.* i. *p.* 235. *Cateſby's Carolina, App. p.* 26.

Urſus albus Martenſii; *Klein. Quad. p.* 82.

L'Ours blanc; *Briſſon. Quad. p.* 128.

* We find white land-bears not only in Ruſſia, but in Poland, Siberia, and Tartary. The mountains of Great Tartary furniſh vaſt numbers of white bears; *Relat. de Grande Tartarie, p.* 8. Theſe mountain bears do not frequent the ſea, and yet they are white. This colour, therefore, ſeems rather to proceed from the difference of climate than from that of the element inhabited by theſe animals.

is white and larger than the common kind*. The difference of habits ſeems not to be more deciſive than that of colour and magnitude. The bear of the northern ſeas feeds upon fiſhes. He never quits the margins of the ſea, and often inhabits the floating iſlands of ice. But, if we conſider that the bear is an animal which eats every thing, that, when preſſed with hunger, he has no choice, and that he is not afraid of water, theſe habits will not appear ſufficient to form diſtinct ſpecies. The fiſh eaten by the ſea-bears is rather a kind of fleſh, being chiefly the carcaſſes of whales, walruſes, and ſeals. The climate produces no other animals. Neither does it afford grain or fruits; and, conſequently, the bear is under the neceſſity of ſubſiſting on the productions of the ſea. Is it not probable that our bears, if tranſported to the mountains of Spitzbergen, and finding no food upon land, would take to the ſea in queſt of ſubſiſtence?

Colour, ſize, and mode of living, being inſufficient, no other eſſential characters remain but thoſe which may be derived from figure. Now,

* Urſus in Polonia variat, maximus nigricans, minor fulvus, minimus argentinus, in confiniis Moſchoviæ pilis nigris et argentei coloris mixti . . . . ex Urſo occiſo pellis detracta fere ad ulnas ſex protendebatur in terra *Chelmenſi*, altera in Palatinatu *Braclavienſi*, tertia ad ulnas quinque in *Bondargoute* pago Palatinatus Pomeraniæ . . . . non raro ex Lithuania advehuntur Gedanum pelles octo pedum; *Rzaczinſki*, *p.* 322.—*Nota*, This paſſage proves that there are white land-bears as large as thoſe of the northern ſeas.

all

all that voyagers have ſaid of the ſea-bear amounts only to this, that his head, body, and hair are longer than thoſe of our bear, and that his ſkull is much harder. If theſe differences were real and conſiderable, they would be ſufficient to conſtitute a ſeparate ſpecies. But I am not certain that Martin has examined with accuracy, and that the other writers who copied him have not exaggerated*. 'Theſe white 'bears,' he remarks, 'are quite otherwiſe ſhaped 'than thoſe that are ſeen in our country; they 'have a long head like unto a dog, and a long 'neck, and they bark like dogs that are hoarſe, 'and all their whole body is much otherwiſe 'ſhaped than ours. They are ſlender in the 'body, and a great deal ſwifter;' *Martin's Voyage to Spitzbergen*, *p.* 100. This deſcription furniſhes the following remarks: 1. That the author does not make theſe bears larger than ours, and, conſequently, that we ought to ſuſpect the evidence of thoſe who tell us that the ſea-bear is ſometimes thirteen feet in length †, 2. That hair as ſoft as wool is not a ſpecific character; for, to render hair ſoft, and even more buſhy, it is only neceſſary that an animal be frequently in the water, as appears from the land

* Anderſon's Hiſt. of Greenland; and Ellis's Voy. to Hudſon's Bay.

† A white bear, which had been killed, was brought aboard. Its ſkin was thirteen feet long; *Troiſième Voyage des Hollandois, par le Nord*, *p.* 35.

and

and water beavers. The latter, who dwell oftener in the water than on land, have coarſer and leſs buſhy hair: And, I am inclined to think, that the other differences are neither real nor ſo conſpicuous as Martin would have us to believe; for Dithmar Blefken, in his deſcription of Iceland, mentions theſe bears, and aſſures us, that he ſaw one killed in Greenland, which raiſed itſelf on the two hind feet, like our bears; but he ſays not one word which indicates that the white bear of Greenland is not entirely ſimilar to ours*. Beſides, when theſe animals find prey on land, they never go to ſea in queſt of food. They devour rain-deer, and ſuch other animals as they can ſeize. They even attack men, and never fail to dig up dead bodies†. But hunger, which they often feel in theſe deſert and barren lands, obliges them to frequent the water, in queſt of ſeals, young walruſes, and

* Habet Iſlandia coloris albi ingentes Urſos .... in Græn-landia urſum magnum et album habuimus obviam, qui neque nos timebat neque noſtro clamore abigi poterat, verum recta ad nos tanquam ad certam prædam contendebat, cumque propius nos acceſſiſſet, in bonbarda trajectus, ibi demum erectus, poſterioribus pedibus tanquam homo ſtabat donec tertio trajiceretur, atque ita exanimatus concidit; *Dithmar Blefken*, *p.* 64.

† The white bears live upon dead whales; and, in the neighbourhood of theſe carcaſſes, they are moſt frequently found. They likewiſe devour men, when they can ſurpriſe them. If they ſcent the place where a dead body is interred, they remove the earth and ſtones, open the coffin, and eat the carcaſs; *Recueil des Voyages du Nord*, *tom.* ii. *p.* 116.

whales.

whales. They take up their reſidence on iſlands of ice, on which they are often ſeen floating, and never abandon their ſtation as long as they can find abundance of food. When theſe boards of ice are detached in the ſpring, the bears allow themſelves to be carried along; and, as they cannot regain the land, or abandon the ice on which they are embarked, they often periſh in the open ſea. Thoſe who arrive with the ice on the coaſts of Iceland or Norway*, are ſtarved to ſuch a degree, that they devour every thing they meet, which may have given riſe to the prejudice, that theſe ſea-bears are more fierce and voracious than the common kind. Some authors tell us, that the ſea-bears are amphibious like the ſeals, and that they can live as long as they pleaſe under water. But the contrary is evident from the manner of hunting them: They are incapable of ſwimming long, and never accompliſh above a league at a time. They are followed by a ſmall boat, and are ſoon worn out with fatigue. If they could diſpenſe with reſpiration, they would dive to the bottom, in order to reſt themſelves. But, when they dive, it is only for a few ſeconds; and, for

* When the iſlands of ice ſeparate from the north of Greenland, and are driven ſouthward, the white bears dare not depart from them. When they arrive in Norway, or at any iſland, they are mad with hunger; and ſtrange ſtories are told of the ravages made by theſe animals; *Recueil des Voyages du Nord, tom.* i. *p.* 100.

fear

fear of drowning, they allow themſelves to be killed on the ſurface of the water *.

Seals are the common prey of the white bears †. But the walrus, from whom they ſometimes carry off the young, pierces them with its tuſks, and puts them to flight. The whale likewiſe overwhelms them by its weight, and baniſhes them from the places they frequent. They ſometimes, however, devour the young whales. All bears are naturally very fat; and the white bears, which live upon animals loaded with greaſe, are fatter than the common kind. Their fat is very like that of the whale. The fleſh of theſe bears is not bad, and their ſkin makes a very warm and durable fur ‡.

* This white bear ſwam about a mile. We purſued him briſkly with three boats; and, after he was fatigued, we killed him; *Trois Navigations des Hollandois du Nord, par Gerard de Vera, p.* 110.—They ſwim from one board of ice to another: When we purſued them in our boats, they dived at one end of the boat, and came up at the other. They likewiſe run very well upon land; *Recueil des Voyages du Nord, tom.* ii. *p.* 116.—Upon the coaſt of Spitzbergen, a white bear took the water, and ſwam more than a league. We followed with our boats, and killed him, &c.; *Troiſième Voyage des Hollandois, p.* 34.

† When we killed this white bear, his ſtomach was opened, in which we found entire pieces of the ſea-dog, with the hair and ſkin on them, which ſhows that he had but lately devoured them; *Ibid. p.* 36.

‡ The white bears go in queſt of wolves and ſea-dogs, and prefer whales to every other fiſh. . . . . They dread the whale, who ſcents and purſues them from a natural antipathy, becauſe they eat her young; *Recueil des Voy. du Nord, tom.* i. *p.* 99.—The ſkins of the white bears are of great uſe to thoſe who

SUPPLEMENT.

I Here give a figure of the white ſea-bear, from a drawing ſent me by the late Mr. Colinſon. If this drawing be exact, it is certain that the ſea-bear is a different ſpecies from the land-bear. The head is ſo long, when compared with that of the common bear, that this character alone is ſufficient to conſtitute a diſtinct ſpecies: And thoſe voyagers adhere to truth when they tell us, that the figure of the ſea-bear is totally different from ours, and that its head and neck are much longer. From the drawing it likewiſe appears, that the feet, inſtead of reſembling the human hand, like thoſe of the land-bear, are formed nearly like the feet of a large dog, and other carnivorous animals of this kind. Beſides, from ſeveral relations, it appears, that ſome of theſe bears are much larger than the land-bear.

who travel in winter. They are dreſſed, even at Spitzbergen, by ſteeping them in warm water, which extracts the greaſe; and they are afterwards dried.... Their greaſe is like ſuet, and, after being well melted, it becomes as clear as whale oil. It is generally burnt in lamps, and has not ſo bad a ſmell as fiſh oil. Our ſailors ſell it for whale oil. The fleſh of theſe bears is fat and whitiſh.—Their milk is very white and fat; *Troiſième Voy. des Hollandois, tom.* ii. *p.* 115.

Gerard

Gerard de Veira aſſerts, that, after killing one of theſe bears, he meaſured the ſkin, and found it to be twenty-three feet long; which is more than triple the length of the common bear*. We likewiſe find, from the Collection of Voyages to the North, that theſe ſea-bears are larger and more ferocious than ours. But, in the ſame Collection, it is ſaid, that, though theſe bears are differently formed, and have the head and neck much longer, and the body more ſlender and agile, they are nearly of the ſame ſize with the common kind †.

All voyagers likewiſe agree, that the ſea-bears have the bones of the head ſo hard, that no blow of a club, though ſufficient to bring an ox to the ground, can ſtun them; and that their voice rather reſembles the barking of an enraged dog than the deep murmuring cry of the common bear. Robert Lade aſſures us, that in the environs of the river Rupper, he killed two ſea-bears of a prodigious ſize; that theſe famiſhed and ferocious animals attacked the hunters with ſuch impetuoſity, that they killed ſeveral Savages, and wounded two Engliſhmen. In page 34, of the third Dutch Voyage to the North, we are told, that the ſailors killed, on the coaſt of Nova Zembla, a ſea-bear whoſe ſkin was thirteen feet long. Upon the whole, therefore, I

* Trois Navigations admirables faites par les Hollandois au Septentrion, p. 110.

† Recueil des Voyages du Nord, tom. ii. p. 115.

am

Plate CCXCV.



A Bell Sculp.

WHITE or POLAR BEAR.

BL

am inclined to believe, that this animal, ſo much celebrated for its ferocity, is really a much larger ſpecies than our bear.

II.

The COW of TARTARY*.

M. GMELIN, in the New Memoirs of the Academy of Peterſburgh, has given a deſcription of a Tartarian cow, which, at firſt ſight, appears to differ from all thoſe we have enumerated under the article *buffalo*. 'This cow,' ſays he, 'which I ſaw alive, and had a drawing made of 'it in Siberia, came from Calmuck. It was 'about two and a half Ruſſian ells in length.

* Grunting ox, with a mane on the neck; whole body covered with long hair, reaching almoſt to the ground; back hunched; tail like that of a horſe, covered with full white and long hairs, ſtrikes with its head like a goat; is very unruly; found in the country of the Calmucks; *Pennant's Synopſ. of Quad. p.* 5.

Vacca grunniens, villoſa, cauda equina, Sarluk; *Nov. Com. Petrop. tom.* v. *p.* 339. *Rubruquis Voy Harris's Coll. vol.* i. *p.* 571.

Bos grunniens, cornibus teretibus, extrorſum curvatis, vellere propendente, cauda undique jubata; *Linn. Syſt. Nat. p.* 99.

Le Bœuf velu; *Le Brun. Voy. Moſcov. tom.* i. *p.* 120.

Bubul; *Bell's Trav. vol.* i. *p.* 224.

'By this ſtandard we may judge of its other 'dimenſions, the proportions of which have 'been accurately obſerved by the painter. The 'body reſembles that of a common cow. The 'horns are bended inward. The hair on the 'body and head is black, except on the front 'and ridge of the back, where it is white. It 'has a mane on the neck; and the whole body, 'like that of a buck, is covered with very long 'hair, which deſcends as far as the knees, and 'makes the legs appear ſhort. It has a bunch 'on the back. The tail reſembles that of a 'horſe, and is white and very buſhy. The fore 'legs are black, the hind ones white, and the 'whole reſemble thoſe of the ox. Upon the 'heels of the hind feet, there are two tufts of 'long hair, the one before and the other behind; 'and, on the fore feet, there is but one tuft 'behind. The excrements are more ſolid than 'thoſe of cows; and, when the animal diſ-'charges urine, it draws its body backward. 'It lows not like an ox, but grunts like a hog. 'It is wild, and even ferocious; for, except the 'man from whom it receives its food, it gives 'blows with its head to every perſon who comes 'near it. The preſence of domeſtic cows it 'hardly ſuffers: Whenever it perceives one of 'them, it grunts, which it ſeldom does on any 'other occaſion.' To this deſcription M. Gmelin adds, 'That it is the ſame animal mentioned 'by Rubruquis in his Travels into Tartary:

'That there are two ſpecies of it among the 'Calmucks, the firſt called *ſarluk*, which I have 'already deſcribed, and the ſecond *chainuk*, 'which differs from the other by the largeneſs 'of its head and horns, and alſo by the tail, 'which at its origin reſembles that of the horſe, 'and terminates like that of a cow. But they 'both have the ſame natural diſpoſitions.'

In the whole of this deſcription, there is only a ſingle character which indicates the Calmuck cows to be a particular ſpecies, and that is their grunting inſtead of lowing. In every other article, they have ſo ſtrong a reſemblance to the biſon, that they muſt belong to the ſame ſpecies, or rather the ſame race. Beſides, though the author ſays, that theſe cows do not low, but grunt, he acknowledges that they very rarely utter that kind of ſound. Perhaps it was an affection peculiar to the individual he ſaw; for Rubruquis, and the other writers whom he quotes, do not mention this grunting. Perhaps the biſons, when enraged, likewiſe make a grunting noiſe. Even our bulls, particularly in the rutting ſeaſon, have a hollow, interrupted voice, which has a greater reſemblance to grunting than to lowing. I am perſuaded, therefore, that this grunting cow of Gmelin is nothing elſe but the biſon, and does not conſtitute a particular ſpecies.

III.

The TOLAI, or BAIKAL HARE*.

THIS animal is very common in the neighbourhood of Lake Baikal in Tartary. It is ſomewhat larger than the rabbit, which it reſembles in the figure of the body, the fur, the gait, the colour, the taſte of the fleſh, and the habit of digging a retreat in the earth. Their internal ſtructure is likewiſe the ſame †; and there is no difference but in the length of the tail; that of the tolai being conſiderably longer.

* Baikal hare, with a tail ſomewhat longer than that of a rabbit; fur of the colour of the common hare; red about the neck and feet; tail black above, white beneath. It is larger than a rabbit; and inhabits the country beyond Lake Baikal; *Pennant's Synopſ. of Quad. p.* 253.

Lepus cauda in ſupina parte nigra, in prona alba; *Briſſon. Quad. p.* 96.

† Cuniculus inſigniter caudatus coloris leporini.——Circa internas partes hæc obſervavi. Cæcum colo paulo anguſtius erat, ſed longius, utpote octo pollicum longitudinem æquans; prope ilei inſertionem cæruleſcens, digiti medii capax, ſenſimque decreſcens, in extremitate vix calamum ſcriptorium latitudine capit, colore ibidem albente gaudens. Oeſophagus uti in lepore ventriculum medium ſubit. A Mongolis *Tolai* dicitur, idemque nomen Ruſſis etiam harum regionum uſitatum eſt; *Gmelin, Nov. Comment. Ac. Petrop. tom.* v. *tab.* 11. *fig.* 2.

Hence

Hence it is extremely probable that this animal is only a variety in the ſpecies of the rabbit. Rubruquis, when treating of the animals in Tartary, ſays, 'There are rabbits with a long tail, 'and black and white hairs at the point. . . . . 'There are no ſtags, few hares, a vaſt number 'of gazelles,' &c. This paſſage ſeems to inſinuate, that our ſhort-tailed rabbit is not found in Tartary*, or rather, that it has undergone ſome variations in that climate, and particularly in the length of the tail; for, as the tolai reſembles the rabbit in every other reſpect, it is unneceſſary to conſider them as belonging to different ſpecies.

IV.

The ZISEL †, or EARLESS MARMOT.

SOME authors, and among others Linnæus, have

* Relation des Voyages en Tartarie, par Rubruquis, p. 25.

† Marmot without external ears, having only a ſmall orifice on each ſide of the head for the admittance of ſounds. It has a blunt noſe, a long ſlender body, and a very ſhort tail. The colour is dark gray, or cinereous brown; *Pennant's Synopſ. of Quad. p.* 276.

Mus Noricus; *Geſner, Quad. p.* 737. *Raii Synopſ. Quad. p.* 220. Zieſel;

have doubted whether the *ziſel* or *zeiſel** (*citelus*), be a different animal from the hamſter (*cricetus*). They have, indeed, a great reſemblance to each other, and inhabit nearly the ſame countries†. They differ, however, in ſo many characters, that I am convinced they conſtitute two diſtinct ſpecies. The ziſel is ſmaller than the hamſter. Its body is long and ſlender like the weaſel; but that of the hamſter is thick like the rat. It has no external ears, but two auditory paſſages concealed under the hair. The ears of the hamſters are ſhort; but they are ſhort and very conſpicuous. The ziſel is of a uniform cinereous gray colour; but the hamſter has three large white ſpots on each ſide of the breaſt. Theſe differences, when joined to this circumſtance, that the two animals, though they inhabit the ſame regions, never intermix, are ſuffi-

Zieſel; *Schwenkfelt. Theriotroph. p.* 86.

Mus citellus, cauda abbreviata, corpore cinereo, auriculis nullis; *Linn. Syſt. Nat. p.* 80.

Cuniculus caudatus, auriculis nullis, cinereus; *Briſſon. Quad. p.* 101.

* Mus Noricus quem citellum appellant, in terræ cavernis habitat, ei corpus ut muſtelæ domeſticæ longum et tenue, cauda admodum brevis, color pilis ut cuniculorum quorumdam pilis, cinereus, ſed obſcurior. Sicut talpa caret auribus, ſed non caret foraminibus quibus ſonum ut avis recipit. Dentes habet muris dentium ſimiles; ex hujus etiam pellibus, quanquam non ſint precioſæ, veſtes ſolent confici; *Georg. Agricola de Animantibus ſubterrancis, p.* 488.

† The hamſter is found in Miſnia, Thuringia, and Hanover; and the ziſel in Hungary, Auſtria, and Poland, where it is called *ſuſet*.

cient

cient to remove every doubt with regard to the diverſity of their ſpecies, though they reſemble one another in the ſhortneſs of the tail and legs, in having teeth like thoſe of the rat, and even in natural habits, ſuch as digging retreats in the earth, laying up magazines of proviſions, deſtroying the corn, &c. Beſides, what muſt remove every doubt on this ſubject, Agricola, an exact and judicious writer, in his treatiſe on ſubterraneous animals, gives a deſcription of both theſe animals, and diſtinguiſhes them ſo clearly, that it is impoſſible to confound them*. Hence we may conclude, that the hamſter and ziſel are very different ſpecies, and perhaps as remote from each other as the weaſel from the rat.

* Iſtius (viverræ ſcilicet) ferocitatis eſt etiam agri vaſtator et cereris hoſtis *hamſter*, quem quidam *cricetum* nominant. —— Exiſtit iracundus et mordax. —— In terræ cavernis habitat non aliter atque cuniculus, ſed anguſtis, et idcirco pellis qua parte utrinque coxam tegit a pilis eſt nuda. Major paulo quam domeſtica muſtela exiſtit; pedes habet admodem breves: Pilis in dorſo color eſt fere leporis, in ventre niger, in lateribus rutilus; ſed utrinque latus maculis albus tribus numero diſtinguitur. Suprema capitis pars, ut etiam cervix, eundem quem dorſum habet colorem; tempora rutila ſunt; guttur eſt candidum. Caudæ quæ ad tres digitos tranſverſos longa ut ſimiliter leporis color. Pili autem ſic inhærent cuti ut ex ea difficulter evelli poſſint. Ac cutis quidem a carne facilius avellitur quam pili ex cute radicitus extrahantur, atque ob hanc cauſam et varietatem pelles ejus ſunt preioſæ; *Georg. Agricol. de Anim. ſubt. p.* 490.—— This deſcription of the hamſter, when compared with that of the ziſel given by the ſame author, and which the reader will find in a note on the preceding page, is ſufficient to demonſtrate that theſe animals are very different from one another.

V.

The ZEMNI, or PODOLIAN MARMOT *.

IN Poland and Ruſſia there is another animal called *ziemni* or *zemni*, which is of the ſame genus with the *ziſel*, but larger, ſtronger, and more miſchievous. The head is pretty thick, the body ſlender, and the ears ſhort and rounded. It has four large cutting teeth, which project out of the mouth, the two in the under jaw being thrice as long as the two in the upper. The feet are very ſhort, covered with hair, divided into five toes, and armed with crooked claws. The hair is ſoft, ſhort, and of a mouſe-gray colour. The tail is of a moderate ſize. The eyes are as ſmall, and equally concealed, as thoſe of the mole. Rzaczinſki gives it the denomination of the *little earth dog*. This author ſeems to be the only one who mentions the zemni, though

* Podolian marmot, with the cutting teeth of the lower jaw half as long again as thoſe of the upper; eyes very minute, and as much hid in the fur as thoſe of the mole; four toes, and a claw inſtead of the fifth, on the four feet; five on the hind; tail ſhort; colour cinereous; ſize of a ſquirrel; *Pennant's Synopſ. of Quad. p.* 277.

Zits-jan; *Le Brun, Voyag. Muſcov. vol.* ii. *p.* 403.

it

it be very common in ſome of the Northern provinces *. Its natural diſpoſitions and habits are nearly the ſame with thoſe of the hamſter and ziſel. It bites cruelly, eats voraciouſly, and lays waſte the corn fields and gardens. It digs a habitation in the earth, and feeds upon grains, fruits, and pot-herbs, of which it lays up magazines in its retreat, where it paſſes the winter.

VI.

THE POUC.

RZACZINSKI mentions another animal which is larger than the domeſtic rat, and called *pouch* by the Ruſſians. It digs a retreat in the earth, and lays waſte the gardens. This animal was ſo numerous near Suraz in Volhinia, that the inhabitants were obliged to abandon the culture of their gardens. It is perhaps the ſame with Seba's *Norwegian rat*, of which he gives a figure and deſcription †.

* Reperitur hoc animal in Podolia, Ukraina, Volhinia circa Suraz, Chodaki, Reinki, Moſſezenica, Sezurowee, et alibi; non raro eruitur ab agricolis ibidem vomeribus; *Rzaczinſki, Auct. p.* 325. *et* 326.

† Mus ex Norvegia cinereo fuſcus; roſtro gaudet ſuillo, capite longiuſculo, brevibus latiſque auriculis, promiſſo myſtace utrinque ad latera narium rigente, dorſum ejus latum et incurvum

VII.

THE PEROUASCA.

RUSSIA and Poland furniſh another animal. In the language of the former country it is called *perewiazka*, and in that of the latter *przewiaſka* *, or *girdled weaſel.* It is ſmaller than the polecat, and covered with whitiſh hair, rayed tranſverſely with ſeveral bands of yellowiſh red. It lives in the woods, and burrows in the ground. Its ſkin is a beautiful fur.

VIII.

The SOUSLIK, or CASAN MARMOT †.

IN Caſan, and the provinces watered by the Volga, as far as Auſtria, there is a ſmall animal called

curvum eſt, abdomen pendulum, femora groſſa, pedum digiti longi acutis unguibus ad fodiendum adaptatis; talparum enim inſtar in erutis ſub terra antris degit; pilus ex dilute cinereo fuſcus eſt; *Seba, vol.* ii. *p.* 64. *fig. tab.* 63. *fig.* 5.

* Rzaczinſki, Auct. p. 328.

† Caſan marmot, with ſhort round ears; ſmooth hair, of a yel-

called *ſouſlik* in the Ruſſian language, which furniſhes a beautiful fur. In figure and ſhortneſs of tail, it has a great reſemblance to the ſhort-tailed field mouſe. But it is diſtinguiſhed from the mouſe or rat kind by its fur, which is every where interſperſed with ſmall ſpots of a bright and ſhining white. Theſe ſpots exceed not a line in diameter, and are placed at the diſtance of two or three lines from each other. They are more conſpicuous, and better defined upon the loins than on the ſhoulders and head. Mr. Pennant, a well known and very able naturaliſt, favoured me with one of theſe ſouſliks, which had been tranſmitted to him from Auſtria, as an animal unknown to the naturaliſts. I recogniſed it to be the ſame animal with that of which I had a ſkin in my poſſeſſion, and of which M. Sanchez* ſent me the following notice: 'Great numbers of the rats called ſouſliks 'are taken in the barks loaded with ſalt in the 'river Kama, which deſcend from Solikamſki, 'where there are ſalt-pits, and fall into the 'Wolga, above the town of Caſan, at the con-

a yellowiſh brown colour, marked with faint round ſpots of white; above and below the eye, a bar of white; face, breaſt, belly, and legs, of a pale yellow; four toes before, five behind; tail half the length of the body, covered with ſhort hair of the colour of the body; ſize of a large rat; *Pennant's Synopſ. of Quad. p.* 273.

Mus marmota, ſp. 15. *Foſter, Hiſt. Nat. Volgæ. Phil. Tranſ. vol.* lvii. *p.* 343.

* Formerly phyſician to the court of Ruſſia.

'fluence

'fluence of the Teluſchin. The Wolga, from 'Simbuſki to Somtof, is covered with theſe ſalt 'barks; and it is in the lands adjacent to theſe 'rivers, as well as in the barks, where the ſouſ-'liks are taken. They have obtained the deno-'mination of *ſouſlik*, which ſignifies *nice-taſted*, 'becauſe they are extremely fond of ſalt.'

SUPPLEMENT.

I Now give a figure of this animal, which is not in the original work. Prince Galitzin, at the deſire of M. de Buffon, was ſo obliging as to ſend eight ſouſliks, with the neceſſary precautions for preſerving them alive, till they ſhould arrive in France. Theſe eight animals arrived in Peterſburgh, after a long journey from Siberia. But, notwithſtanding all the attention paid to them, they died in paſſing from Peterſburgh to France. The inſtructions from Siberia were, to feed them only with grain or hempſeed; to give them as much air as poſſible; to put a conſiderable quantity of ſand in their cage, becauſe, in their natural ſtate, they burrow in light ſoils.

Theſe

Plate CCXCVI.



A Bell Sculp.

SOUSLIK.

BL

Theſe animals generally dwell in the deſerts, and dig holes in the declivities of mountains, provided the earth be blackiſh. Their holes are not of equal depths, and are ſeven or eight feet long, never ſtraight, but winding, and have from two to five entries, the diſtances of which are unequal, being from two to ſeven feet aſunder. In theſe holes they make different apartments, and amaſs in them their winter proviſions during the ſummer. In the cultivated fields, they collect ears of corn, peaſe, lint, and hemp ſeeds, and place them ſeparately in different departments of their holes. In uncultivated lands, they collect the ſeeds of various herbs. During ſummer, they feed upon grains, herbs, roots, and young mice; for, when the mice are large, the ſouſlik is unable to kill them. Beſide their magazines of proviſions, theſe animals dig ſeparate holes ſome feet diſtant from the former, in which they repoſe. They throw all their ordure out of their retreats. The females bring forth from two to five young at a litter, which are blind and naked, and begin not to ſee till after the hair appears. The time of geſtation is not exactly known.

IX.

The SIBERIAN, or GILDED MOLE*.

IN Siberia, there is a mole called the *gilded mole*, whoſe ſpecies is probably different from the common kind; becauſe it wants the tail, has a very ſhort muzzle, the hair mixed with green and a gold-colour, and only three toes on the fore feet, and four on thoſe behind, while the common mole has five toes on all the feet. We are ignorant of the proper name of this animal.

X.

THE WHITE WATER RAT.

THE water rat of Europe is found in Canada; but its colours are different. It is brown on the back;

* Siberian mole, with a very ſhort noſe; no ears; three toes on the fore feet, on the outmoſt toe a very large claw; four toes on the hind feet; body of an equal thickneſs; rump quite round; no tail; of a beautiful green and gold colour, variable with the light; *Pennant's Synopſ. of Quad. p.* 313.

Talpa

back; and the reſt of the body is white, and in ſome places yellow. The head, muzzle, and end of the tail are white. The hair is ſofter and more gloſſy than that of our water rat. But, in every other article, theſe animals are perfectly ſimilar, and undoubtedly belong to the ſame ſpecies. The white hair is an effect of cold; and it is probable, that white water rats may be found in the North of Europe, as well as in Canada.

XI.

THE GUINEY HOG*.

THOUGH this animal differs from the common hog in ſome characters, I preſume that it is

Talpa Sibericus verſicolor, *Aſpalax* dictus; *Seb. Muſ. tom.* i. *p.* 51. *tab.* 32. *fig.* 4, 5. *Klein. Quad. p.* 60.

Talpa Aſiatica, ecaudata, palmis tridactylis; *Linn. Syſt. Nat. p.* 73.

Talpa ecaudata, ex viridi aurea, pedibus anticis tridactylis, poſticis tetradactylis; *Briſſon. Quad. p.* 206.

* Hog with a leſſer head than the common kind; very long, ſlender, and ſharp pointed ears; tail hanging down to the heels, without hairs; the body covered with ſhort red ſhining hairs, but about the neck and lower part of the back a little longer; no briſtles; a domeſtic variety of the common kind; *Pennant's Synopſ. of Quad. p.* 69.

Porcus

is the ſame ſpecies, and that theſe differences are only varieties produced by the influence of climate. Of this we have an example in the Siam hog, which likewiſe differs from that of Europe; and yet it is unqueſtionably the ſame ſpecies, ſince they intermix and produce together. The Guiney hog is nearly of the ſame figure with ours, and of the ſame ſize with the Siam hog; that is, ſmaller than the wild boar, or the domeſtic hog. It is an original native of Guiney, and has been tranſported to Braſil, where it has multiplied prodigiouſly. It is domeſtic, and perfectly tame. It has ſhort, red, ſhining hair, and no briſtles even on the back. The neck and crupper, near the origin of the tail, are covered with longer hairs than thoſe on the reſt of the body. Its head is not ſo large as that of the European hog, from which it differs in the figure of the ears, which are very long, ſharp-pointed, and lie back upon the neck. Its tail is alſo much longer, reaching near the ground, and entirely deſtitute of hair. This race, which, according to Marcgrave, is peculiar to Guiney, is found likewiſe in Aſia, and particularly in the iſland of Java*, from whence

Porcus Guineenſis; *Marcgrave, Braſil. p.* 230. *Raii Synopſ. Quad. p.* 96.

Sus porcus, dorſo poſtice ſetoſo, cauda longitudine pedum; *Linn. Syſt. Nat. p.* 103.

* In the iſland of Java the hogs have no briſtles; and they are ſo fat, that their bellies drag upon the ground; *Voyage de Mandelſlo, tom.* ii. *p.* 349.

they

they ſeem to have been tranſported by the Dutch to the Cape of Good Hope*.

XII.

The ETHIOPIAN, or CAPE VERD BOAR †.

IN the neighbourhood of Cape Verd, there is another hog or boar, which, from the number of

* The hogs which have been brought from Java to the Cape have very ſhort legs; and they are black, and without briſtles. Their belly is ſo large that it nearly reaches the ground. Their lard is not ſo firm as that of the European hog.——Their fleſh is extremely good; *Deſcript. du Cap de Bonne Eſperance, par Kolbe, tom.* iii. *p.* 48.

† Ethiopian hog with ſmall tuſks in the lower jaws; very large ones in the upper, in old boars, bending up towards the forehead in form of a ſemicircle; no fore teeth; noſe broad, depreſſed, and almoſt of a horny hardneſs; head very large and broad; beneath each eye a hollow, formed of looſe ſkin, very ſoft, and wrinkled; under theſe a great lobe or wattle, lying almoſt horizontal, broad, flat, and rounded at the end, placed ſo as to intercept the view of any thing below from the animal. Between theſe and the mouth, on each ſide, a hard callous protuberance; mouth ſmall; ſkin duſky; briſtles diſpoſed in *faſciculi*, of about five each; longeſt between the ears, and on the beginning of the back, and but thinly diſperſed on the reſt of the back. Ears large and ſharp-pointed, inſide lined with long whitiſh hairs; tail ſlender and flat; does not reach lower than the thighs, and covered with hairs diſpoſed in *faſciculi*; *Pennant's Synopſ. of Quad.* *p.* 70.

of his teeth, and the enormous ſize of the tuſks in his upper-jaw, appears to be a peculiar race, if not a different ſpecies from that of all the other hogs, and approaches toward the babirouſſa. Theſe tuſks have a greater reſemblance to ivory horns than to teeth. They are half a foot long, five inches in circumference at the baſe, and bended nearly like the horns of a bull. This character alone is not ſufficient to conſtitute a difference in ſpecies. But, what ſupports this preſumption, he likewiſe differs from all other hogs in the length of the aperture of his noſtrils, in the great breadth and figure of his jaws, and in the number and form of his grinders. However, we have ſeen the tuſks of a wild boar, which was killed in the woods of Burgundy, and made an approach to the Cape Verd boar: Its tuſks were about three inches and a half long, and four inches in circumference at the baſe. They had alſo a double bend, like the horns of a bull. They appeared likewiſe to conſiſt of ſolid ivory; and, it is certain, that this boar muſt have had larger jaws than the common kind.

Engalla; *Sorranto's Voyage in Churchill, vol.* i. *p.* 667. *Barbot, p.* 437. *Dampier's Voyage, vol.* i. *p.* 320.

African wild boar; *Adanſon's Voyage, p.* 139. *Deſlandes Martyns, Mem. Acad. tom.* v. *p.* 386.

Sus Æthiopicus, Hardlooper; *Pallas Miſcel. Zool. p.* 16. *tab.* 11. *Specil. faſc.* 2. *p.* 1. *tab.* 1. *Flacourt Hiſt. Madagaſc. p.* 511.

Sus Æthiopicus, ſacculo molli ſub oculis; *Linn. Syſt. Nat. Append. tom.* iii. *p.* 223.

Hence

Hence we may preſume, that the Cape Verd boar is only a ſimple variety, a particular race, in the ſpecies of the common hog.

SUPPLEMENT.

WE formerly ſuggeſted, that the wild boar of Cape Verd appeared to be a different race, and perhaps a different ſpecies from all the other hogs. The celebrated M. Allamand, Profeſſor of Natural Hiſtory at Leyden, was kind enough to ſend us an engraving of this animal, and afterwards wrote M. Daubenton in the following terms:

'I believe, Sir, that the wild boar repreſent-
'ed in the plate which I ſent you, is the ſame
'with that pointed out by you under the deno-
'mination of the *Wild Boar of Cape Verd*. This
'animal is ſtill living (May 5, 1767) in the me-
'nagery of the Prince of Orange. I viſit him
'occaſionally, and always with freſh pleaſure.
'I cannot help admiring the ſingular form of
'his head. I have written to the Governor of
'the Cape of Good Hope, begging him, if poſ-
'ſible, to tranſmit me another. But of this I
'have little hope; becauſe, even at the Cape, it
'was regarded as a monſter, which had never
'hitherto been ſeen by any perſon. If, how-
'ever, I ſucceed in my requeſt, I ſhall ſend the
'animal to France, that you and M. de Buffon

'may have an opportunity of examining it 'We tried to make the one in our poſſeſſion 'copulate with a ſow; but, as ſoon as ſhe was 'preſented to him, he darted upon her with 'fury, and tore her to pieces.'

We have copied the engraving tranſmitted to us by M. Allamand. M. Pallas and M. Voſmaër have uſed the ſame figure, and each of them have given a deſcription of this animal. M. Allamand, in his letter to M. Daubenton, dated at Leyden, October 31, 1766, remarks, that the head is the moſt ſingular part of this boar, which chiefly differs from that of our hogs by two uncommon appendixes, in the form of ears, at the ſide of each eye.

We ſhall here remark, that the diſdain and cruelty, mentioned by M. Allamand, of this wild boar to the ſow when in ſeaſon, ſeems to prove it to be a different ſpecies from our hogs. A farther proof ariſes from the difference in the form of the head, both external and internal. However, as it approaches the hog much nearer than any other animal, and as it is found not only in the neighbourhood of Cape Verd, but not very diſtant from the Cape of Good Hope, we ſhall call it the *African boar*, and give the hiſtory and deſcription of it from the writings of Pallas and Voſmaër.

Voſmaër calls it the *wild African boar*, or the *boar with a large ſnout*, and diſtinguiſhes it, with propriety, from the Guiney hog with long pointed

pointed ears, from the American pecari, and from the Indian babirouſſa.

'M. de Buffon,' he remarks, 'ſpeaking of a 'part of the jaws, the tail and feet of a ſingular 'wild boar of Cape Verd, preſerved in the royal 'cabinet, ſays, that his has cutting teeth: But 'no ſuch teeth appear in our ſubject.'

Hence M. Voſmaër inſinuates, that it is not the ſame animal. We have ſeen, however, that M. Allamand and I agree, that this Cape de Verd boar, of which I have had an opportunity of examining a part of the head only, is found, notwithſtanding, to be the ſame large ſnouted hog which M. Voſmaër ſaid was unknown to all the naturaliſts.

M. Tulbagh, Governor of the Cape of Good Hope, who tranſmitted this wild boar to Europe, writes, that it was taken between Caffraria and the country of the great Namaquas, about two hundred leagues from the Cape, and that it was the only one of the ſpecies which had been ſeen there alive. M. Voſmaër likewiſe received the ſkin of an animal of the ſame ſpecies, which appeared to differ, in ſome particulars, from the live animal.

This animal was kept in a cage; 'and, as I was 'informed,' M. Voſmaër remarks, 'that he was 'not miſchievous, I opened the door of his cage. 'He came out, without ſhowing any marks of 'rage. He gaily friſked about in queſt of food, 'and greedily devoured whatever was given him.

'Having left him alone for a few moments, I 'found him, on my return, buſy in digging the 'earth, where, notwithſtanding the pavement 'was made of ſmall bricks well cemented, he 'had already made a hole of an incredible ſize, 'with a view, as we afterwards diſcovered, to 'reach a common ſewer which paſſed below at 'a great depth. I cauſed his labour to be inter-'rupted; and it was not without much trouble, 'and the aſſiſtance of ſeveral men, that we could 'overcome his reſiſtance, and make him return 'to his cage. His reſentment was expreſſed by 'ſharp and mournful cries. He ſeems to have 'been taken in the African woods when he was 'very young; for he has grown conſiderably 'ſince his arrival in Europe, and is ſtill alive '(1767). He paſſed the laſt winter very well, 'though the froſt was ſevere, and he was con-'fined during the greateſt part of that ſeaſon.

'In agility, he exceeds the hogs of this coun-'try. He freely allows himſelf to be ſtroked 'with the hand, and even with a ſtick. He ſeems 'to be pleaſed with rough friction; for it was 'by this means that we made him remain quiet 'when the painter drew his picture. When 'provoked or rudely puſhed, he retires back-'ward, always facing the aſſailant, and ſhaking 'or ſtriking forcibly with his head. When let 'looſe after long confinement, he is very gay, 'leaps, and purſues fallow-deer, and other ani-'mals. On theſe occaſions, he erects his tail,

'which

'which is commonly pendulous. He emits a 'ſtrong odour, which is not diſagreeable; but 'I cannot compare it to any other ſmell. When 'I ſtroked him with the hand, this odour ap-'proached to that of a new cheeſe. He eats all 'kinds of grains. His food, when on ſhip-'board, was maize, and as much freſh herbage 'as could be procured. But, after he had taſted 'barley and European wheat, with which other 'animals in our menagery are fed, he preferred 'this kind of food, and roots dug out of the 'earth. He was ſo fond of rye-bread, that he 'followed any perſon who had a piece of it. 'When he eats or drinks, he ſupports himſelf 'on the knees of his fore feet; and he often 'reſts in this poſition. His ſenſes of hearing 'and ſmelling are very acute; but his ſight is 'limited by the ſmallneſs and ſituation of his 'eyes, which prevent his ſeeing objects around 'him, becauſe they are placed higher and nearer 'each other than in other hogs, and there are 'two large excreſcences at the ſides and below 'the eyes. He has more ſagacity than the 'common hog.

'The figure of the head is terrible. The 'flatneſs and breadth of the noſe, joined to the 'length of the ſnout, the ſingular excreſcences 'riſing from the ſides of the eyes, and the 'ſtrong tuſks, give to the animal a monſtrous 'aſpect. The length of the body is about four 'Rheniſh feet.

'In figure, he makes a near approach to 'that of the domeſtic hog: He appears to be 'ſmaller, his back being flatter, and his legs 'ſhorter.

'When compared with other hogs, his head 'is deformed both in figure and dimenſions. 'The muzzle is large, flat, and very hard. The 'noſe is moveable, a little bended laterally to-'ward the baſe, and terminates obliquely. The 'noſtrils are large, diſtant from each other, and 'appear only when the head is raiſed. The 'upper lip is hard, and thick at the ſide. Round 'the tuſks it is prominent and pendulous, form-'ing behind them a kind of oval cartilaginous 'protuberance, which covers the corners of the 'muzzle.

'This animal wants fore teeth both above 'and below; but the gums are ſmooth, rounded, 'and hard.

'The tuſks of the upper jaw are an inch thick 'at the baſe, crooked, and project out of the 'mouth five inches and a half, and terminate in 'an obtuſe point. On the ſide of each of them 'there is a kind of furrow. Thoſe of the un-'der jaw are much ſmaller, leſs crooked, and 'almoſt triangular. By continual friction againſt 'the upper tuſks, they appear to be cut oblique-'ly. We were prevented from examining the 'grinders by the furious reſiſtance of the ani-'mal.

'In proportion to the head, the eyes are ſmall,

'placed

'placed higher, and nearer each other and the 'ears, than the common hog. The iris is of 'a deep brown colour, and the cornea white. 'The upper eye-lids are garniſhed with brown, 'ſtiff, erect, and very cloſe ciliæ, which are 'longer in the middle than at the two ſides. 'There are no ciliæ on the under eye-lids.

'The ears are pretty large, more round than 'pointed, covered on the inſide with cloſe yel-'low hair, and bend back toward the animal's 'body. Under the eyes there is a kind of bul-'bous or glandular ſac; and immediately below 'that, appear two round, flat, thick, and hori-'zontal excreſcences, about two inches and a 'quarter in diameter. . . . . In a ſtraight line 'between theſe excreſcences and the muzzle, 'there is, on each ſide of the head, a hard, 'round, ſharp protuberance.

'The ſkin ſeems to be very thick, filled with 'lard in the ordinary places, but flaccid on the 'neck, groin, and dewlap. In ſome places it 'appears to be ſlightly furrowed, unequal, and 'as if the upper part of it fell off by intervals. 'Thinly diſperſed over the body are ſome tufts 'of hairs, conſiſting of three, four, or five, 'longer and ſhorter, and placed in a ſtraight 'line near one another. The front, and be-'tween the ears, ſeem to be wrinkled, and are 'adorned with very cloſe, white, and brown 'hairs. From thence, toward the baſe of the 'muzzle, deſcends a narrow band of black and

'gray

'gray hairs, which, ſeparating in the middle, 'fall upon each ſide of the head. On the nap 'of the neck, and the interior part of the back, 'the briſtles are longeſt and cloſeſt: Their co-'lour is a duſky brown and gray. Some of them 'are ſeven or eight inches long: In thickneſs 'they exceed not thoſe of the common hog, and 'they ſplit in the ſame manner. Theſe briſtles 'are not ſtraight, but ſlightly inclined. Upon 'the back, their number is ſo ſmall, that the 'ſkin appears to be naked. The flanks, breaſt, 'belly, ſides of the head and neck, are garniſhed 'with ſmall white briſtles.

'The feet, like thoſe of our hogs, are divid-'ed into two black, pointed hoofs. The tail is 'naked, hangs perpendicularly, and terminates 'almoſt in a point.

'The colour of the head is blackiſh; but that 'of the back and belly is a bright reddiſh gray.'

Notwithſtanding theſe differences pointed out by M. Voſmaër, and the repugnance which this boar diſcovered to the ſow that was preſented to it, I am uncertain whether it is not a variety only of our European hog. This ſpecies varies greatly in Aſia, Siam, and China. My uncertainty is increaſed by having found, about thirty years ago, an enormous head of a wild boar that was killed in my own woods, the tuſks of which were nearly as large as thoſe of the Cape boar.

Beſides,

Beſides, M. Comerſon informs me, that there are wild boars in Madagaſcar, whoſe head, from the ears to the eyes, is of the ordinary form; but that below the eyes is a protuberance which gradually tapers to the end of the ſnout, ſo that the animal appears to have two heads, the half of the one ſunk into the other. The fleſh of this hog is ſlimy and inſipid. This information made me ſuſpect, that the animal I had firſt mentioned under the denomination of the *Wild Boar of Cape Verd*, becauſe its head was brought from the neighbourhood of that Cape, and afterwards called it the *Wild African Boar*, becauſe it exiſts in the neighbourhood of the Cape of Good Hope, is likewiſe found in the iſland of Madagaſcar.

Addition by Profeſſor Allamand.

M. de Buffon, in his hiſtory of the hog, has ſhown, that he eludes all thoſe methodical diſtributions into claſſes and genera, the diſtinguiſhing characters of which are derived from particular parts of the body. Though his reaſons are not to be anſwered, they would have acquired additional force, if he had been acquainted with the animal under conſideration. It is a wild boar ſent from the Cape of Good Hope,

Hope, in the year 1765, to the menagery of the Prince of Orange, which has hitherto been unknown to the Naturaliſts. Beſide the many ſingularities which make the European hog a detached ſpecies, this animal exhibits freſh anomalies, which diſtinguiſh him from all the other varieties of the ſame genus; for the figure of his head is not only different, but he has no cutting teeth, from which moſt of our Nomenclators have drawn their diſtinctive characters, though the number of the teeth is by no means uniform, even in our domeſtic hogs.

To M. Tulbagh, Governor of the Cape of Good Hope, who miſſes no opportunity of tranſmitting to Europe the curious productions of that country, we are indebted for this wild boar. In his letter, he remarks, that this animal was taken about two hundred leagues from the Cape, and that it was the firſt which had ever been ſeen there alive. The laſt year, however, he ſent another, which is ſtill living; and, in 1767, he tranſmitted a ſkin, of which we have only been able to preſerve the head. Theſe circumſtances ſeem to indicate, that this animal is not rare in its native country. I know not whether Kolbe means to ſpeak of theſe boars in the following paſſage. ‘ In the country occupied by the Dutch, ‘ we rarely meet with *wild hogs:* As there are ‘ few woods, which are their common retreats, ‘ they have no motive to frequent theſe territo- ‘ ries. Beſides, the lions, tigers, and other ra-

‘ pacious

'pacious animals, prevent the multiplication of 'the hogs, by devouring great numbers of 'them*.' He adds no deſcription; and, therefore, no concluſion can be drawn. Beſides, he ranks among the number of Cape hogs the large ant-eater, which is an American animal, and has no reſemblance to the hog. What credit is due to an author ſo ill informed?

The body of our African boar reſembles that of the European kind: But it differs widely in the form of the head, which is of an enormous ſize. The moſt conſpicuous objects are the large tuſks which ſpring from each ſide of the upper jaw, and are directed almoſt perpendicularly upward. They are near ſeven inches long, and terminate in a blunt point. Two ſimilar tuſks, but ſmaller and thinner, riſe from the under jaw, and apply themſelves exactly to the external ſide of the ſuperior tuſks when the mouth is ſhut. Theſe are powerful arms, which he may uſe to advantage in his native country, where he muſt be often expoſed to the attacks of carnivorous animals.

His head, which is large and flat before, terminates in an ample ſnout, nearly equal in diameter to the breadth of the head, and of a hardneſs which approaches to that of horn. He uſes it, like our hogs, in digging the earth. His eyes are ſmall, and ſituated ſo far forward in the head, that he can only ſee ſtraight before him. They

* Deſcript. du Cap de Bonne-eſperance, tom. iii. p. 43.

are

are nearer each other and the ears, than in our European boars. Below the eyes, there is a depreſſion in the ſkin, which forms a kind of wrinkled ſac. The inſide of his ears are cloſely covered with hair. A little lower, and near the ſide of the eyes, the ſkin riſes and forms two excreſcences, which, when viewed at a certain diſtance, have a perfect reſemblance to a couple of ears, being of the ſame figure and ſize, and, though not moveable, they lie nearly in the ſame plane with the fore-head. Still lower, between theſe excreſcences and the tuſks, there is a large wart on each ſide of the head. It is eaſy to perceive, that a configuration of this kind muſt give a very ſingular aſpect to the animal. When viewed in front, we think we ſee four ears upon a head which has no reſemblance to that of any known animal, and inſpires terror by the largeneſs of its tuſks.

Pallas* and Voſmaër, who had given good deſcriptions of this boar, tell us, that, when he arrived in Holland, he was very mild and tame; that, as he had been ſeveral months on board the veſſel, and had been taken young, he was become almoſt domeſtic; but that, when purſued by ſtrangers, he retired ſlowly backward, and preſented his front with a menacing air; and even thoſe who were daily near him were not without apprehenſions of danger. One day he con-

* Pallas, Miſcellanea Zoologica; et ejuſdem Spicilegia Zoologica, Faſciculus Secundus.

ceived a reſentment againſt his keeper, whom he wounded ſo deſperately in the thigh with his tuſks, that the poor man died next day. To prevent ſimilar accidents, he was taken out of the menagery, and ſo cloſely impriſoned that nobody could approach him. He died in about twelve months, and his ſkin is preſerved in the Prince of Orange's cabinet. The other one, which is now in the ſame menagery, is ſtill very young, and his tuſks exceed not two inches in length. When allowed to come out of the place where he is confined, he teſtifies his joy by leaping, bounding, and running with much more agility than our hogs. On theſe occaſions he carries his tail perfectly erect. The inhabitants of the Cape, on account of his ſwiftneſs, give him the denomination of *hart looper*, or courſer.

This animal unqueſtionably forms a genus diſtinct from all the other known races of hogs. Though he reſembles them in the body, the want of cutting teeth, and the ſingular ſtructure of the head, are characters too marked to be aſcribed to the influence of climate, eſpecially as there are hogs in Africa which differ from ours by being ſmaller only. Beſides, it would appear that he cannot produce with our hogs. A Guiney ſow was preſented to him. After ſmelling her for ſome time, he purſued her into a narrow place from which ſhe could not eſcape, and tore her in pieces with his tuſks. He afterwards abuſed a common ſow to ſuch a degree, that ſhe was carried

carried off, in order to ſave her from deſtruction.

It is wonderful that this animal, which, as I formerly remarked, ſeems not to be rare in its native country, has not been mentioned by any traveller, or at leaſt in terms ſo vague, that no idea can be formed of it. Flacourt * tells us, that in Madagaſcar there are wild boars which have two horns on the ſide of the noſe, reſembling two calloſities; and that theſe animals are nearly as dangerous as the wild boars of France. M. de Buffon imagines, that this paſſage relates to the babirouſſa, and perhaps he may be right: But it may, with equal probability, relate to our boar. Theſe horns, which reſembled two calloſities, may have been the tuſks of this boar, as well as thoſe of the babirouſſa, though extremely ill deſcribed; and what Flacourt adds, that theſe animals are dangerous, ſeems to correſpond better with our African boar. M. Adanſon †, when ſpeaking of a wild boar he ſaw in Africa, expreſſes himſelf in theſe terms: 'I ſaw,' ſays he, 'one of thoſe enormous wild boars peculiar 'to Africa, and which, I believe, have never been 'mentioned by any Naturaliſt. It was black, 'like the European wild boar, but vaſtly larger 'in ſize. It had four large tuſks, the two ſu-'perior of which bended in a ſemicircular form 'toward the front, and had the appearance of

* Hiſt. de la grand Iſle Madagaſcar, p. 152.

† Hiſt. Nat. du Senegal, p. 76.

'horns.'

Plate CCXCVII.



A Bell Sculp.

BOAR of CAPE VERDE.

BL

'horns.' M. de Buffon ſuppoſes, that M. Adanſon means to deſcribe the babirouſſa; and, were it not for his authority, I ſhould have been led to believe, that M. Adanſon intended to point out our African boar; for, if he had the babirouſſa under his inſpection, I cannot comprehend how he ſhould remark, that it had never been mentioned by any Naturaliſt. He is too much converſant in Natural Hiſtory, not to know that the babirouſſa has been often deſcribed, and that its head is found in almoſt every Muſæum in Europe.

But in Africa there is, perhaps, another ſpecies of wild boar, with which we are ſtill unacquainted, and was the animal ſeen by M. Adanſon. This conjecture is ſupported by the deſcription which M. Daubenton has given of a part of the jaws of a Cape Verd wild boar. His remarks clearly prove, that it differs from our boars, and would apply directly to the one under conſideration, if there had not been cutting teeth in each of theſe jaws.

* * * * * *

I willingly aſſent to moſt of M. Allamand's reflections. But I perſiſt in believing, as he himſelf at firſt believed, that the Cape Verd boar which I mentioned, and the jaws deſcribed by M. Daubenton, belong to the ſame ſpecies, though

BL

'horns.' M. de Buffon ſuppoſes, that M. Adanſon means to deſcribe the babirouſſa; and, were it not for his authority, I ſhould have been led to believe, that M. Adanſon intended to point out our African boar; for, if he had the babirouſſa under his inſpection, I cannot comprehend how he ſhould remark, that it had never been mentioned by any Naturaliſt. He is too much converſant in Natural Hiſtory, not to know that the babirouſſa has been often deſcribed, and that its head is found in almoſt every Muſæum in Europe.

But in Africa there is, perhaps, another ſpecies of wild boar, with which we are ſtill unacquainted, and was the animal ſeen by M. Adanſon. This conjecture is ſupported by the deſcription which M. Daubenton has given of a part of the jaws of a Cape Verd wild boar. His remarks clearly prove, that it differs from our boars, and would apply directly to the one under conſideration, if there had not been cutting teeth in each of theſe jaws.

* * * * * *

I willingly aſſent to moſt of M. Allamand's reflections. But I perſiſt in believing, as he himſelf at firſt believed, that the Cape Verd boar which I mentioned, and the jaws deſcribed by M. Daubenton, belong to the ſame ſpecies, though

the former had no cutting teeth; for in no animal is the number and order of the teeth ſo various as in the hog kind. This difference alone ſeems not ſufficient to conſtitute two ſpecies of the African wild boar and that of Cape Verd, eſpecially as all the other characters of the head appear to be the ſame.

XIII.

THE MEXICAN WOLF*.

AS the wolf is a native of cold climates, he muſt have paſſed into America by the northern lands,

* Wolf with a very large head; great jaws; vaſt teeth; on the upper lips very ſtrong briſtles, reflected backwards, not unlike the ſofter ſpines of a porcupine; and of a gray and white colour; large erect cinereous ears; the ſpace between marked with broad tawny ſpots: The head aſh-coloured, ſtriped tranſverſely with bending duſky lines; neck fat and thick, covered with a looſe ſkin, marked with a long tawny ſtroke: On the breaſt is another of the ſame kind: Body aſh-coloured, ſpotted with black; and the ſides ſtriped, from the back downwards, with the ſame colour; belly cinereous; tail long, of the colour of the belly, tinged in the middle with tawny; legs and feet ſtriped with black and aſh colour: Sometimes this variety is found white; *Pennant's Synopſ. of Quad. p.* 151.

Xoloizcuintli; *Hernand. Mex. p.* 479.

Cuetlachtli, ſeu lupus Indicus; *Fernand. Ann. Nov. Hiſp. p.* 7.

Canis

lands, being found equally in both continents. We have mentioned black and gray wolves in North America. It appears that this ſpecies is diffuſed as far as New Spain and Mexico; and that, in this warm climate, it has undergone ſome alterations, without changing its nature or diſpoſitions; for the Mexican wolf has the ſame figure, appetites, and habits, as the European or North American wolf; and all of them appear to be the ſame ſpecies. The Mexican wolf, or rather the wolf of New Spain, where he is more common than in Mexico, has five toes on the fore feet, and four on thoſe behind. The ears are long and erect; and the eyes ſparkle like thoſe of our wolf. But the head is twice as large, the neck thicker, and the tail leſs buſhy. Above the mouth, there are ſome briſtles as large, but not ſo ſtiff, as thoſe of the hedge-hog. Upon an aſh-coloured ground, the body is marked with ſome yellow ſpots. The head is of the ſame colour with the body, and marked with tranſverſe browniſh lines, and the front is ſpotted with yellow. The ears are gray, like the head and body. There is a long yellow ſpot on the neck, another on the breaſt, and a

Canis cinereus, maculis fulvis variegatus, tæniis ſubnigris a dorſo ad latera deorſum hinc inde deductis; *Briſſon. Quad. p.* 172.

Canis Mexicanus, cauda deflexa, lævi, corpore cinereo, faſciis fuſcis maculiſque fulvis variegato; *Linn. Syſt. Nat. p.* 60.

third on the belly. On the flanks are tranſverſe bands from the back to the belly. The tail is gray, with a yellow ſpot in the middle. The legs are barred with gray and brown. This is the moſt beautiful of all wolves, and its ſkin ſhould be eſteemed for its variety of colours*. But nothing indicates it to be a different ſpecies from the common kind, which varies from gray to white, from white to black, and a mixture of both, without changing its ſpecies: And we learn from Fernandes, that theſe wolves of New Spain vary like the European wolf; for, even in this country, they are not all marked according to our deſcription, ſome of them being of a uniform colour, and even totally white†.

* It might be ſuppoſed, on account of the variety of colours, that the Mexican wolf is a lynx, which, like the wolf, is found in both Continents. But a bare inſpection of the figure given by Recchi will ſhow, that it has a perfect reſemblance to the wolf, and none at all to the lynx.

† Cuetlachtli, ſeu lupus Indicus Jo. Fabri. Xoloitſcuintli. Forma, colore, moribus, et mole corporis lupo noſtrati ſimilis eſt, atque adeo ejus (ut mihi quidem videtur) ſpeciei, ſed ampliori capite. Tauros vero ſicut et noſtras lupus aggreditur, et interdum etiam homines; reperiuntur nonnulli candentes. ——Vivit in calidis Novæ Hiſpaniæ locis; *Fernand. Hiſt. Anim. Nov. Hiſp. p. 7.*

XIV.

THE ALCO.

WE formerly remarked, that, in Peru and Mexico, before the arrival of the Europeans, there were domeſtic animals called *alco*, which were nearly of the ſame ſize and diſpoſitions with our ſmall dogs; and that, from this conformity, and becauſe they were equally faithful and attached to their maſters, the Spaniards gave them the name of *Mexican* or *Peruvian dogs*. The ſpecies of theſe animals, indeed, ſeems not to differ eſſentially from that of the dog. Beſides, the word *alco* might, perhaps, be a generic and not a ſpecific term. Recchi has left us a figure of one of theſe alcos, which, in the Mexican language, was called *ytzcuinte porzotli*. It was prodigiouſly fat, and probably degraded by its domeſtic ſtate, and by too much nouriſhment. The head is repreſented to be ſo ſmall that it has no proportion to the ſize of the body. Its ears are pendulous, which is another mark of ſlavery. The muzzle reſembles that of a dog; the fore part of the head is white, and the ears are pretty yellow. The neck is ſo ſhort, that there is no interval between the head

and ſhoulders. The back is arched, and covered with yellow hair. The tail is white, ſhort, and pendulous, and deſcends no lower than the thighs. The belly is large, tenſe, and marked with black ſpots. It has ſix conſpicuous paps. The legs and feet are white; and the toes, like thoſe of the dog, are armed with long ſharp claws *. Fabri, who gives this deſcription, concludes, after a long diſſertation, that this animal is the ſame with the *alco;* and I believe his concluſion is well founded. But this appellation muſt not be regarded as excluſive; for there is another race of dogs in America to which it applies with equal propriety. Beſide the dogs, Fernandes remarks, which the Spaniards tranſported from Europe to America, there are three other ſpecies, which are pretty ſimilar to ours, both in their nature and diſpoſitions; neither is their figure altogether different. The firſt and largeſt of theſe American dogs is called *xoloiztcuintli.* He is often three cubits long; and, what is remarkable, he is totally deſtitute of hair, and only covered with a ſoft cloſe ſkin, marked with yellow and blue ſpots. The ſecond is covered with hair, and of the ſize of our ſmall Malteſe dogs. He is marked with

* Ytzcuinte porzotli. Canis Mexicana.——Ad unguem animal quod hic proſtat, nanum, pingue, et manſuetum effigiatum mihi videtur illud eſſe quod Americani nomine communi alco vocabant; *Hernand. Hiſt. Mex. p.* 466. *et* 478. *fig. p.* 466.

white,

white, black, and yellow. His deformity, though ſingular, is not diſagreeable: His back is arched; and his neck ſo ſhort, that his head ſeems to proceed immediately from the ſhoulders. He is named in his own country *michuacanens*. The third, which likewiſe reſembles our ſmall dogs, is called *techichi*. But he has a wild and melancholy aſpect. The Americans eat his fleſh*.

From comparing the teſtimonies of Fabri and Fernandes, it is obvious, that the ſecond dog, which this laſt author calls *michuacanens*, is the ſame with the *ytzcuinte porzotli*, and that this ſpecies of animal exiſted in America before the arrival of the Europeans; and the ſame muſt have been the caſe with the *techichi*. I am perſuaded, therefore, that the word *alco* was a generic name, which applied equally to both, and perhaps to other races or varieties that we are unacquainted with. But, as to the firſt, Fernandes ſeems to have been deceived both with regard to the name and the animal. No author mentions naked dogs in New Spain. This race, commonly called *Turkiſh dogs*, come from India, and other warm climates of the Old Continent; and, it is probable, that thoſe ſeen in America by Fernandes, had been tranſported thither, eſpecially as he mentions his having ſeen this kind in Spain, before his departure for America. The proof is ſtill farther corrobo-

* Fernand. Hiſt. Anim. Nov. Hiſp. p. 6. cap. 20. et p. 10. cap. 21.

rated by the circumſtance of this animal's having no American name: Fernandes gives it the borrowed one of *xoloitzcuintli*, which is the name of the Mexican wolf. Thus, of theſe three ſpecies or varieties of American dogs, there remain only two, which are called indiſcriminately *alco*; for, independent of the fat alco, which ſerved as a lap-dog to the Peruvian ladies, there was a meager and melancholy alco, which was employed in the chaſe; and, it is by no means impoſſible, that the three races, apparently different from thoſe of our dogs, ſpring from the ſame ſtock. The dogs of Lapland, Siberia, Iceland, &c. muſt have paſſed, like the foxes and wolves, from the one Continent to the other, and degenerated by the influence of the climate and a domeſtic ſtate. The firſt *alco*, with the ſhort neck, approaches the Iceland dog; and the *techichi* of New Spain is, perhaps, the ſame animal with the *koupara**, or *crab-dog* of Guiana, which in figure reſembles the fox, and in hair the jackal. He has been called the *crab-dog*, becauſe he chiefly lives upon crabs and other cruſtaceous animals. I have ſeen only one ſkin of this Guiana animal; and I am unable to determine whether it is a particular ſpecies, or whether it ſhould be referred to thoſe of the dog, fox, or jackal.

* Canus ferus, major, cancroſus, vulgo dictus *koupara*; *Barrère, Franc. Equin. p.* 149.

XV.

The TAYRA, GALERA, or GUINEY WEASEL*.

THIS animal, of which Mr. Brown has given a figure and deſcription, is of the ſize of a ſmall rabbit, and has a conſiderable reſemblance to the weaſel or martin. He digs an habitation in the earth, and has great ſtrength in his fore-feet, which are much ſhorter than thoſe behind. His muzzle is long, a little ſharp, and garniſhed with whiſkers. The under jaw is much ſhorter than the upper. He has ſix cutting and two canine teeth in each jaw, without reckoning the grinders. His tongue is rough, like that of the cat. His head is oblong, as well as the eyes, which laſt are placed at an equal diſtance between the ears and the point of the muzzle. His ears

* Guiney weaſel, with the upper jaw much longer than the lower; eyes placed midway between the ears and tip of the noſe; ears like the human; tongue rough; tail declining downwards, leſſening towards the point; feet ſtrong, and formed for digging; ſhape of the body like that of the rat; ſize of a ſmall rabbit; of a duſky colour; the hair rough; *Pennant's Synopſ. of Quad. p.* 225.

Galera ſubfuſca, cauda elongata, auribus ſubnudis appreſſis; *Brown's Hiſt. of Jamaica, p.* 485. *tab.* 49.

are

are flat, and reſemble thoſe of man. His feet are ſtrong, and adapted for digging. The metatarſal bones are long; and he has five toes on all his feet. His tail is long, and tapers to a point. His body is oblong, and has a great reſemblance to that of a large rat. He is covered with brown hairs, ſome of which are longer than others. This animal appears to be a ſmall ſpecies of martin or polecat. Linnæus imagined, that the black weaſel of Braſil might be the *galera* of Mr. Brown; and, indeed, the two deſcriptions afford ſome reaſon for the conjecture *. Beſides, this black weaſel of Braſil is likewiſe found in Guiana, where it is called *tayra* †; and I ſuſpect that the word *galera* is a

* Muſtela atra collo ſubtus macula alba triloba. Habitat in Braſilia. . . . *Holmens. Conſer. Brown, Jam.* 485. *tab.* 49. *fig.* 1. Galera, ſtatura martis, at nigra, pilis rigidioribus, auriculæ rotundæ villoſæ. Area ante oculos cineraſcens, maculæ ſub medio collo non vero ſub gula. Mammæ pone umbilicum quator. —— *Nota*, Mr. Brown ſays, that he ſaw only two paps on the lower part of the belly; but the other two might eſcape his obſervation. He alſo ſays, that the galera is found in Guiney, and the black weaſel in Braſil. But this aſſertion ought not to ſtumble us; for it happens daily, that Braſilian animals are firſt tranſported to Guiney, and afterwards paſs for animals belonging to that country; and *vice verſa*. I agree, therefore, with Linnæus, in thinking that the galera of Mr. Brown is the ſame animal with the black weaſel of Braſil.

† Muſtela maxima atra, moſchum redolens. Tayra. Groſſe belette. This animal, by rubbing itſelf againſt trees, leaves a kind of unctuous humour which has a ſtrong odour of muſk; *Barrère, Franc. Equin. p.* 155.

corruption

corruption derived from *tayra*, which is the true name of this animal.

XVI.

THE MERIAN OPOSSUM*.

THIS animal is a native of the ſame climate, and belongs to a neighbouring ſpecies with the other opoſſums. Sibilla Merian is the firſt writer that has given a figure and a ſhort ac-

* Merian opoſſum, with long, ſharp pointed, naked ears; head, and upper part of the body, of a yellowiſh brown colour; the belly white tinged with yellow; the fore feet divided into five fingers; the hinder into four and a thumb, each furniſhed with flat nails; tail very long, ſlender, and, except at the baſe, quite naked; *Pennant's Synopſ. of Quad. p.* 210.

Dezak; *Merian. Inſect. Surinam, p.* 66. *tab.* 66. ——— *Merian* is the name of a German paintreſs, who firſt diſcovered this ſpecies at Surinam.

Mus ſylveſtris Americanus; *Seb. Muſ. tom.* i. *p.* 49. *tab.* 31. *fig.* 5.

Philander ex rufo helvus in dorſo, in ventre ex flavo albicans; *Briſſon. Quad. p.* 212.

Mus ſylveſtris Americanus, catulos in dorſo gerens; *Klein. Quad. p.* 58.

Didelphis dorſigera, cauda baſi piloſa, corpore longiore, digitis manuum muticis; *Linn. Syſt. Nat. p.* 72.

Le Philandre de Surinam; *Buffon.*

count of it*. Seba afterwards gave Merian's figure for the female, and added a new figure for the male, with a kind of deſcription. This animal, ſays he, has very brilliant eyes, which are ſurrounded with a circle of deep brown hair. The body is covered with ſoft hair, or rather wool of a reddiſh yellow colour, but of a bright red on the back. The front, muzzle, belly, and feet, are whitiſh yellow. The ears are naked, and pretty hard. On the upper lip, and alſo above the eyes, there are long hairs in the form of whiſkers. Its teeth, like thoſe of the dormouſe, are very ſharp. Upon the tail of the male, which is naked, and of a pale red colour, there are duſky red ſpots, which appear not on the tail of the female. The feet reſemble the hands of an ape; thoſe before have four toes, and the thumb garniſhed with ſhort, blunt nails; but on the hind feet the thumb alone has a flat, blunt nail, the other four toes being armed with ſmall ſharp claws. The young of theſe animals grunt nearly in the ſame manner as a pig. The paps of the female reſemble thoſe of the murine opoſſum. Seba properly remarks, that, in the

* Hic genus gliris ſylveſtris depictum eſt, qui catulos quorum vulgo quinque vel ſex una fœtura enititur in dorſo ſecum portat; ex flavo fuſci coloris, at ſubucula ejus alba eſt: Cum antra exeunt alimenti cauſa, a catulis circum curruntur, qui jam ſaturi vel moleſtias ſuſpicantes, illico matris dorſum aſcendant, et caudas ſuas parentum caudis involvunt, qui illos ſtatim in antra apportant; *Mar. Sibil. Merian. Inſect. Surinam. p.* 66. *fig. tab.* 66.

figure given by Merian, the feet and toes are ill repreſented *. The females produce five or ſix at a litter. The tail is very long, and prehenſile, like that of the ſapajous. The young mount upon the back of the mother, and adhere firmly with their tails twiſted round hers. In this ſituation ſhe carries them about with great nimbleneſs and ſecurity.

XVII.

THE AKOUCHI, or OLIVE CAVY.

THE akouchi is pretty common in Guiana and other parts of South America. It differs from the agouti by having a tail, which is wanting in the agouti. The akouchi is generally ſmaller than the agouti, and its hair is not red, but of an olive colour †.

Theſe are the only differences we know between the akouchi and agouti, which, however, ſeem to be ſufficient to conſtitute two diſtinct ſpecies.

* Seba, vol. i. p. 49. tab. 21. fig. 4.

† Cuniculus minor, caudatus, olivaceus; *Akouchi, Barrère, Hiſt. Nat. de la Fr. Equin. p.* 153.

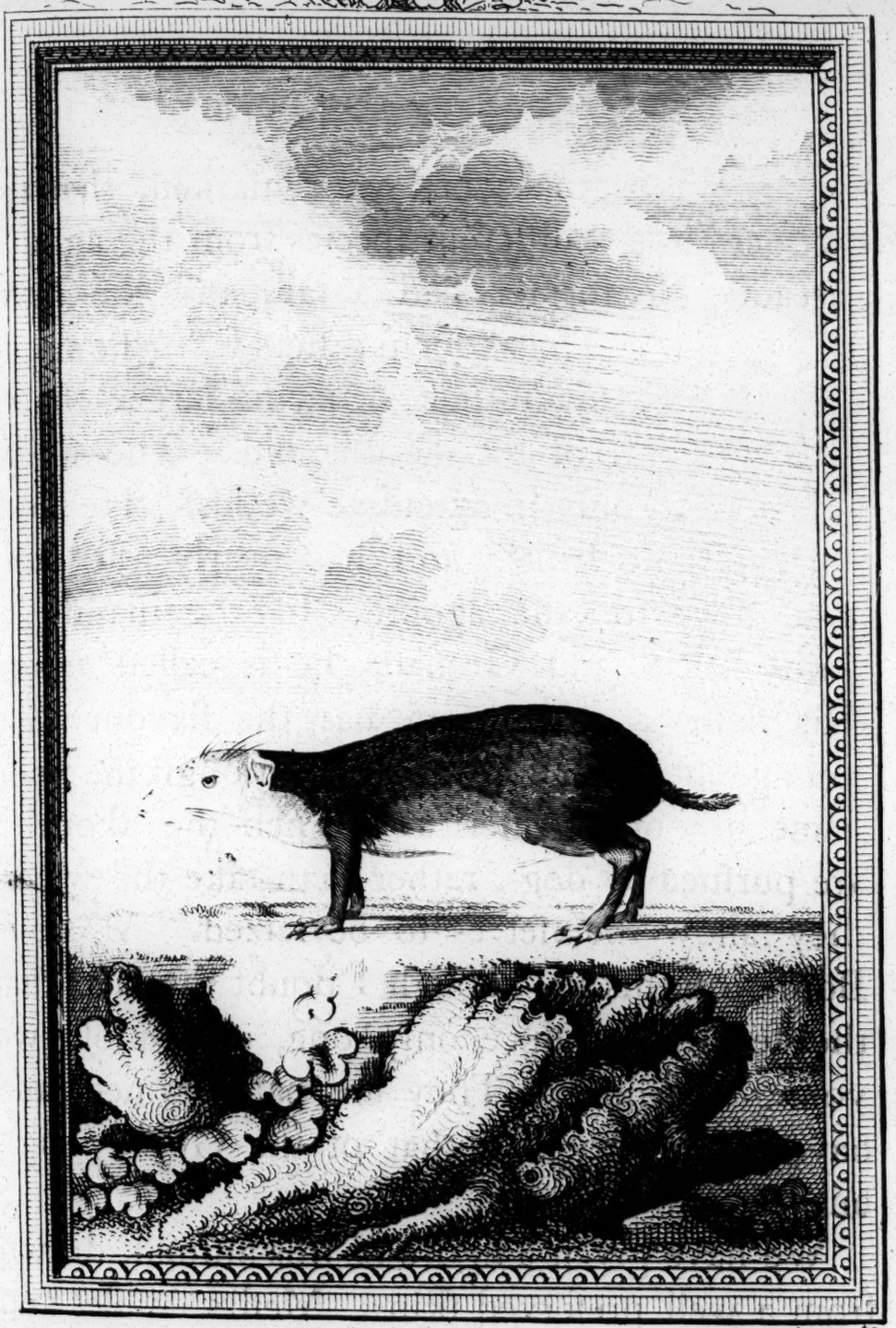
SUP-

SUPPLEMENT.

IN the original work we remarked, that the akouchi was a different ſpecies from the agouti; becauſe the former had a tail, and the latter had no tail. The akouchi differs from the agouti ſtill more in magnitude, being no larger than a young rabbit of ſix months old. The akouchi is found only in extenſive woods. He feeds on the ſame fruits, and has nearly the ſame manners, with the agouti. In the iſlands of Saint Lucia and Grenada he is called *agouti*. His fleſh is white, and has the flavour of a young rabbit; and he is ranked amongſt the fineſt game in South America. When the akouchis are purſued by dogs, rather than take the water, they allow themſelves to be ſeized. M. de la Borde informs us, though I doubt the fact, that the females produce only one, or at moſt two young at a litter. They are eaſily tamed, and have a ſmall cry like that of the Guiney pig; but it is ſeldom heard.

We have given a figure of this animal, drawn from a well preſerved ſkin. Meſſrs Aublet and Olivier aſſure me, that, in Cayenne, the hare is called *agouti*, and the rabbit *akouchi*; but that the agouti is the beſt food; and, ſpeaking of the game of this country, they inform me, that the

Plate CCXCVIII.



A Bell Sculp.

Acouchi.

BL

the armadillos are ſtill better food, except the nine-banded armadillo, which has a ſtrong ſmell of muſk; that, after the armadillos, the paca is the beſt game, becauſe its fleſh is wholeſome and fat: The next in order are the agouti and akouchi. They likewiſe maintain, that the red couguar is uſed as food, and that its fleſh has the taſte of veal.

XVIII.

The TUCAN, or MEXICAN SHREW*.

FERNANDES has given the name of *tucan* to a ſmall quadruped of New Spain, whoſe ſize, figure, and natural habits, make it approach nearer to the mole than to any other ſpecies. It appears to be the ſame animal deſcribed by Seba under the denomination of the *red mole* of America†; at leaſt, the deſcriptions of the two

* Mexican ſhrew, with a ſharp noſe; ſmall round ears; without ſight; two long fore teeth above and below; thick, fat, fleſhy body, ſhort legs, ſo that the belly almoſt touches the ground; long crooked claws; tawny hair; ſhort tail; length from noſe to tail, nine inches; *Pennant's Synopſ. of Quad. p.* 310.

† Seba, vol. i. p. 51. tab. 32. fig. 2.

authors

authors correſpond ſufficiently to juſtify this conjecture. The tucan is perhaps ſomewhat larger than our mole. It is equally fat and fleſhy, and its legs are ſo ſhort that the belly touches the ground. The tail is ſhort; the ears are ſmall and round; and the eyes are ſo minute that they can ſcarcely be of any uſe to the animal. But it differs from the mole in the colour of the hair, which is reddiſh yellow, and in the number of toes, having only three before and four behind, while the mole has five toes on all the feet. It ſeems to differ from the mole in other articles: Its fleſh is good eating. It poſſeſſes not the inſtinct of diſcovering its retreat after having once left it, but, at every time, is obliged to dig a new hole; ſo that, in certain ſoils, which are agreeable to theſe animals *, the holes are ſo numerous, and ſo near each other, that circumſpection is neceſſary to walk there with ſafety.

* Fernand. Hiſt. Anim. Nov. Hiſp. p. 9. cap. 24.

XIX.

The BRASILIAN SHREW*.

WE mention this animal under the denomination of the *Braſilian ſhrew;* becauſe we are ignorant of its proper name, and it has a greater reſemblance to the ſhrew than to any other animal. It is, however, conſiderably larger, being about five inches long from the extremity of the muzzle to the origin of the tail, which is not two inches, and, conſequently, is proportionally ſhorter than that of the common ſhrew. It has a pointed muzzle, and very ſharp teeth. Upon a brown ground-colour, three pretty large black bands extend longitudinally from the head to the tail, under which the ſcrotum appears hanging between the hind feet. This animal, ſays Marcgrave, ſports with the cats, who diſcover no inclination to eat it. In the ſame manner, the cats kill the European ſhrews, but never eat them.

* Braſilian ſhrew, with a ſharp noſe and teeth; pendulous ſcrotum. It is of a duſky colour, marked along the back with three broad black ſtrokes. The length from noſe to tail, five inches; that of the tail two; *Pennant's Synopſ. of Quad. p.* 309.

Mus araneus figura muris; *Marcgr. Braſil, p.* 229.

XX.

THE ROCK CAVY*.

THIS animal, which is a native of Braſil, is neither a rabbit nor a rat, but ſeems to partake of both. It is about a foot long, by ſeven inches in circumference. Its general colour is the ſame with that of our hares; and its belly is white: Its upper lip is divided in the ſame manner, and it has the ſame large cutting teeth; and whiſkers round the mouth and on the ſides of the eyes. But its ears are rounded like thoſe of the rat, and ſo ſhort that they exceed not the height of a finger's breadth. The fore legs are not above three inches in length, and thoſe behind are a little longer. The fore feet have four toes covered with a black ſkin, and armed with ſmall ſhort claws. The hind feet have only three toes, and the middle one is the longeſt.

* Rock cavy, with divided upper lip; ſhort ears; four toes on the fore feet, and three on the hind: Colour of the upper part of the body like that of the common hare; belly white: The length one foot; *Pennant's Synopſ. of Quad. p.* 244.

Aperea Braſilienſibus, nobis vel *dratte* vel *boſchratte*; *Marcgr. Braſil, p.* 223. *Piſo, Braſil, p.* 103. *Raii Synopſ. Quad. p.* 206.

It has no tail. Its head is ſomewhat longer than that of the hare, and its fleſh is like that of the rabbit, which it reſembles in its manner of living *. It likewiſe retires into holes: It does not, however, dig the earth, like the rabbit, but conceals itſelf in the clefts of rocks. Hence it is eaſily ſeized in its retreat. It is hunted as game, and its fleſh is preferable to that of our beſt rabbits †. The animal mentioned by Oviedo, and afterwards by Charlevoix ‡ and du Perrier de Montfraizier, under the denomination of *cori*, appears to be the ſame with the *aperea* or rock cavy ‖. In ſome parts of the Weſt Indies, theſe animals may, perhaps, be reared in warrens, or in houſes, like our rabbits; and this may be the reaſon why ſome of them are red, white, black, and variegated. This conjecture is not without foundation; for Garcilaſſo informs us, that, in Peru,

* Marcgrav. Hiſt. Nat. Braſil, p. 223.

† Piſo, Hiſt. Braſil, p. 103.

‡ Oviedo remarks, that the *cori* reſembles a ſmall rabbit; and that ſome of them are totally white, and others a mixture of different colours; *Hiſt. de St. Dominique, par le P. Charlevoix, tom.* i. *p.* 35.

‖ The *cori* is a ſmall quadruped, ſomewhat reſembling our rabbits and moles. It has ſmall ears, which it carries ſo flatly reclined backward, that it is difficult to perceive them. It has no tail. Some of them are white, others black, and others ſpotted with black and white. Some of them are totally red, and others ſpotted with red and white. They are tamed, and never defile the houſes. They eat herbage, and are eaſily maintained. Their fleſh has the taſte and flavour of the beſt rabbits; *Hiſt. des Voyages, par du Perrier de Montfraizier, p.* 343.

there are wild and domeſtic rabbits which have no reſemblance to thoſe of Spain *.

XXI.

THE TAPETI, or BRASILIAN HARE †.

THE tapeti ‡ ſeems to make a near approach to the ſpecies of the hare or rabbit. It is found in Braſil, and many other parts of America. In figure, it reſembles the European rabbit; and it reſembles the hare in ſize and colour, only it is a little browner. Its ears are very long, and ſhaped like thoſe of the hare. Its hair is red on the forehead, and whitiſh on the throat. Some of them have a white circle

* Hiſt. des Incas, tom. ii. p. 267.

† Braſilian hare, with very long ears; a white ring round the neck; face of a reddiſh colour; chin white; black eyes; colour of the body like the common hare, only darker; belly whitiſh; no tail; ſome want the white ring round the neck; *Pennant's Synopſ. of Quad. p.* 252.

Tapeti; *Marcgr. Braſil, p.* 223. *Piſo, Braſil, p.* 102.

Cuniculus Braſilienſis *tapeti* dictus; *Raii Synopſ. Quad. p.* 205.

Lepus Braſilienſis, cauda nulla; *Linn. Syſt. Nat. p.* 78.

Lepus ecaudatus; *Briſſon. Quad. p.* 97.

Collared rabbit; *Wafer's Voyage in Dampier.*

‡ *Tapity*, according to P. d'Abbeville; *Miſſ. au Maragnon, p.* 251.

round

round the neck; but others have a white throat, breaſt, and belly. They have black eyes, and whiſkers like our rabbits; but they want the tail *. The tapeti reſembles the hare in its manner of living, in fecundity, and in the quality of its fleſh, which is extremely good. Like the hare, it dwells in the fields or in the woods, and burrows not, like the rabbit †. The animal of New Spain, mentioned by Fernandes, under the name of *citli*, appears to be the ſame with the *tapeti* ‡ of Braſil; and both are perhaps only varieties of the European hares, who have paſſed by the northern lands from the one Continent to the other.

Some other ſpecies of animals might be added to the preceding liſt; but the accounts given of them are ſo vague, that I chooſe rather to confine myſelf to what is known with ſome degree of certainty, than to give way to conjecture, or to exhibit creatures of imagination as real ſpecies. But, notwithſtanding this limitation, intelligent men will eaſily perceive, that my hiſtory of quadrupeds is as complete as they could poſſibly expect. It comprehends a great number of new animals, and none of thoſe which were formerly known are omitted.

* Marcgr. Hiſt. Nat. Braſil, p. 223. fig. p. 224.

† Piſon, Hiſt. Braſil, p. 102.

‡ Citli. —— Lepores novæ Hiſpaniæ noſtratibus ſimiles forma atque alimento, ſed auriculis longiſſimis pro corporis magnitudine, latiſſimiſque; *Fernandes, Hiſt. Anim. Nov. Hiſp. p. 2. cap. 3.*

The preceding notices, though compoſed of twenty-one articles, contain not above nine or ten diſtinct ſpecies; for all the others are only varieties. The white bear is only a variety of the common kind; the Tartarian cow, of the biſon; the Guiney and Cape-Verd hogs, of the common hog, &c. Hence, by adding theſe ten ſpecies to about one hundred and eighty, whoſe hiſtory we have given, the total number of quadrupeds, the exiſtence of which is properly aſcertained, exceeds not two hundred ſpecies upon the ſurface of the whole known world.

ADDITIONS from the Supplementary Volume.

THE CRAB-EATER*.

THE name *crab-eater*, or *crab-dog*, has been given to this animal, becauſe crabs are his principal food. He has very little relation to the dog or fox, to which ſome travellers have compared him. He ſeems to be more nearly allied to the opoſſums; but he is much larger, and the female crab-eater carries not her young, like the female opoſſum, in a pouch under her belly. Hence the crab-eater appears to be a detached ſpecies, and different from all thoſe we have formerly deſcribed.

In the figure, the long naked, ſcaly tail, the large thumbs without claws on the hind feet,

* Cayenne opoſſum, with a long ſlender face; ears erect, pointed, and ſhort; the coat woolly, mixed with very coarſe hairs, three inches long, of a dirty white from the roots to the middle; from thence to the ends of a deep brown; ſides and belly of a pale yellow; legs of a duſky brown; thumb on each foot diſtinct, on the toes of the fore feet, and thumb on the hind, are nails; on the toes of the hind feet crooked claws; tail very long, taper, naked, and ſcaly. Length ſeventeen inches; that of the tail fifteen and a half. The ſubject meaſured was very young; *Pennant's Synopſ. of Quad. Edit.* 2. *p.* 309.

Canis ferus major, canoroſus vulgo dictus. Koupara; *Barrère, Franc. Equin. p.* 149.

and the flat claws on the fore feet, are remarkable. This animal, whoſe ſkin is preſerved in the royal cabinet, was young when it was tranſmitted to us. It is a male; and the following is a deſcription of it:

The length of the whole body, from the noſe to the origin of the tail, is about ſeventeen inches. Before, it is ſix inches three lines high, and ſix inches and a half behind. The tail, which is grayiſh, ſcaly, and naked, is fifteen inches and a half long, ten lines in circumference at the origin, and gradually tapers to a point.

As the legs of this animal are very ſhort, he has, at a diſtance, ſome reſemblance to a terrier. The head is not very different from that of a dog, and exceeds not four inches one line in length, from the point of the noſe to the occiput. The eye is not large; the edges of the eye-brows are black; and, above the eye, there are hairs of an inch and a quarter in length. There are ſimilar hairs on the ſide of the cheek near the ear. The whiſkers are black, and about an inch and a half long. The opening of the mouth is near two inches. The upper jaw is armed, on each ſide, with a crooked canine tooth, which reaches beyond the under jaw. The ear is brown, naked, broad, and round at the extremity.

The hair on the body is woolly, and interſperſed with other long ſtiff black hairs. Theſe long

long hairs increaſe upon the thighs and the ſpine of the back, which is totally covered with them, and form a kind of mane from the middle of the back to the origin of the tail: They are three inches long, of a dirty white colour from the baſe to the middle, and afterwards of a dark brown as far as the point. The hair on the ſides, as well as on the belly, is yellowiſh white; but it approaches more to yellow toward the ſhoulders, and on the thighs, neck, breaſt, and head, where this yellow tincture is mixed in ſome places with brown. The ſides of the neck are yellow; and the legs and feet are of a blackiſh brown colour. There are five toes on each foot. The fore foot is an inch and three quarters long, the largeſt toe nine lines, and the furrowed claw two lines. The toes are a little bended, like thoſe of the rat, the thumb alone being ſtraight. The hind feet are an inch and eight lines long, the largeſt toe nine lines, and the thumb half an inch. The thumb is thick, broad, and at a diſtance from the toes, as in the apes. The nail of the thumb is flat; but thoſe of the other toes are crooked, and reach beyond their points. The thumb of the fore foot is ſtraight, and not removed from the other toe.

M. de la Borde informs me, that this animal is very common in Cayenne, and that it always frequents the ſavannahs, and other marſhy places.

'It

'It climbs trees,' he remarks, 'with great 'dexterity, and continues oftener upon them 'than on the ground, eſpecially during the day. 'It has fine teeth, and defends itſelf againſt the 'dogs. Crabs are its principal nouriſhment, 'and it is always fat. When unable to draw 'the crabs from their holes with its foot, it in-'troduces the tail, which it uſes as a hook. 'The crab ſometimes lays hold of the tail, and 'makes the animal cry. This cry has ſome re-'ſemblance to that of a man, and is heard at a 'great diſtance. But its ordinary voice is a 'kind of grunting like a pig. The female pro-'duces four or five young at a litter, and de-'poſits them in the hollows of old trees. The 'natives of the country eat its fleſh, which re-'ſembles that of a hare. Theſe animals are 'eaſily tamed, and they are fed in the houſes 'like dogs and cats, with all kinds of victuals. 'Hence their taſte for crabs is by no means ex-'cluſive.'

It is alledged, that there are two ſpecies of crab-eaters in Cayenne. The firſt is the animal we have already deſcribed: The other is not only a different ſpecies, but belongs to a different genus. Its tail is totally covered with hair, and it ſeizes crabs with its paws only. Theſe two animals reſemble each other in the head alone; and they differ in the figure and proportions of the body, as well as in the ſtructure of the feet and claws.

Plate CCXCIX.



A Bell Sculp.t

CRAB EATER.

B L

Plate CCC



ABell Sculp.t

ANONYMOUS ANIMAL

BL

ANONYMOUS ANIMAL.

WE here give the figure of an undeſcribed animal, the drawing of which was made by the Chevalier Bruce, who permitted me to copy it. The animal, which we ſhall call *anonymous*, till we learn its real name, has ſome ſimilarities to the hare, and others to the ſquirrel. Mr. Bruce gave the following account of it in writing.

'In Lybia, on the ſouth ſide of the lake 'formerly called *Palus Tritonides*, there is a 'very ſingular animal, from nine to ten inches 'long, with ears nearly as long as the half of 'the body, and proportionally broad, a circum-'ſtance which takes place in no other quadruped, 'except the long-eared bat. Its muzzle re-'ſembles that of the fox; and yet it ſeems to 'approach nearer to that of the ſquirrel. It lives 'on the palm-trees, of which it eats the fruit. 'It has ſhort retractile claws, and is a very beau-'tiful creature. Its colour is white mixed with 'a little grey and a bright yellow. The inſide 'of the ears is naked in the middle only. They 'are covered with brown hair mingled with 'yellow, and garniſhed within with large white 'hairs. The end of the noſe is black, the tail 'yellow, and black at the point. The tail is

'pretty

'pretty long, but of a different form from that 'of the ſquirrel; and all the hair, both on the 'body and tail, is very ſoft.'

MADAGASCAR RAT.

IN the figure is repreſented a ſmall animal from Madagaſcar, which was drawn alive, when in the poſſeſſion of the Counteſs of Marſan. It appeared to make a nearer approach to the ſpecies of the palm ſquirrel than to that of the rat; for I was aſſured that it frequented the palm-trees. I have not been able to procure farther information concerning this animal. It may be remarked, however, that, as its claws did not project, it ſeemed to conſtitute a ſpecies very different from that of the rat, and to approach nearer to the palm-ſquirrel. To this animal may be referred the rat on the ſouth-weſt coaſt of Madagaſcar, mentioned by the Dutch voyagers; for they tell us, that theſe rats live in the palm-trees, and eat the dates; that their body is long, their muzzle ſharp, their legs ſhort, and their tail long and ſpotted*. Theſe characters correſpond ſo well with thoſe repreſented in the figure of our Madagaſcar rat, as to induce us

* Recueil des Voyages qui ont ſervi à l'Etabliſſement de la Compagnie des Indes Orientales, tom. i. p. 413.

to

Plate CCCI.



A Bell Sculp.t

MADAGASCAR RAT.

BL

to believe that the animal formerly mentioned belongs to this ſpecies.

It lived ſeveral years with the Counteſs of Marſan. Its movements were extremely briſk, and its cry was nearly ſimilar to that of the ſquirrel, though much weaker. Like the ſquirrels, it carried its food to its mouth with the fore paws, erected its tail, and leaped about. It bit deſperately, and could not be tamed. It was fed with almonds and fruits. It never came out of its cage, except in the night; and it endured the winters very well in an apartment where the cold was moderated by a ſmall fire.

[*As the* COUNT DE BUFFON *has obſerved no Syſtematic Order in his Hiſtory of Quadrupeds, the following Index, in which the animals are arranged according to the improved Edition of* Mr. PENNANT's *Synopſis, will, in ſome meaſure, ſupply that ſeeming defect.*]

SYSTEMATIC INDEX.

DIV. I. HOOFED QUADRUPEDS.

PENNANT's Synopſis.			*BUFFON.*		
GENUS I. HORSE.			GENUS I. HORSE.		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
1	GENEROUS	1	1	HORSE	iii. 306
2	Diſhiketei	4			
3	Aſs	8	3	Aſs	ib. 398
4	Zebra	13	4	Zebra	vi. 264
5	Quacha	14		Mules	viii. 1
	II. OX.			II. BULL.	
1	Bull	15	1	Ox	iii. 423
	A. Great Indian	16			
	B. Small Indian	17			
	C. Abyſſinian	ib.			
	D. Boury	ib.			
	E. Tinian	ib.			
	F. Lant	ib.			
	G. European	ib.			
	H. American	19		H. Biſon	vi. 198
2	Grunting	20	2	Cow of Tartary	viii. 225
3	Buffalo	24	3	Buffalo	vi. 151
4	Muſk	27	4	Muſk	ib. 191
	A. Cape	28			
5	Dwarf	30	5	Dwarf	vi. 164
				1 A. Common	

PENNANT's Synopsis.			*BUFFON.*		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
	III SHEEP.			III. SHEEP.	
1	A. Common	33	1	A. Common	iii. 462
	B. Cretan	ib.		B. Cretan	vi. 211
	C. Hornleſs	34		C. Hornleſs	iii. 472
	D. Many-horned	ib.		D. Many-horned	ib. 484
	E. Long-haired	ib.			
	F. African	35		F. African	vi. 212
	G. Broad-tailed	ib.		G. Broad-tailed	ib. 208
	H. Fat-rumped	36			
	H*. Wild	38			
2	Bearded	46			
	IV. GOAT.			IV. GOAT.	
1	Ibex	49	1	Ibex	vi. 363
2	Caucaſan	51			
	a. Domeſtic	53		*a.* Domeſtic	iii. 462
	b. Angora	55		*b.* Angora	ib. 498
	c. Syrian	56		*c.* Syrian	vi. 378
	d. African	57		*d.* African	vi. 379
	e. Whidaw	ib.		*e.* Juda	vi. 378. 390
	f. Capricorn.	ib.		*f.* Capricorn	ib. 373
	V. GIRAFFE.			V. GIRAFFE.	
1	Camelopard	58	1	Camelopard	vii. 109
	VI. ANTILOPE.			VI. ANTILOPE.	
1	Gnou	62			
2	Chamois	64	2	Chamois	v. 363
3	Blue	66			
4	Ægyptian	67	4	Ægyptian	vi. 408
5	Leucoryx	68			
6	Algazel	69	6	Algazel	ib. 414
7	Indian	70	7	Indian	vii. 40
8	Harneſſed	71	8	Harneſſed	ib. 12
9	Guiney	72	9	Guinee, or grimm	ib. 14
10	Royal	ib.	10	Royal	ib. 27
11	Indoſtan	73			
12	White-footed	74			
13	Swift	76	13	Nanguer, or Swift	vi. 409
14	Red	ib.	14	Nagor, or red	vii. 39
15	Striped	77	15	Condoma, or ſtriped	ib. 8
16	Common	78	16	Common	vi. 412
	a. Brown	80		*a.* Brown, or Lidmé	ib. 413
	b. Smooth-horned	ib.		*b.* Smooth-horned	ib. 414
17	Barbary	81	17	Barbary, or gazelle	ib. 397
				18 Flat-	

PENNANT's Synopsis.			*BUFFON.*		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
18	Flat-horned	81	18	Flat-horned, or Kevel	vi. 400
19	White-faced	82	19	White-faced, or Pygargus	ib. 417
20	Springer	ib.			
21	Chineſe	84	21	Chineſe, or Tzeiran	ib. 405
22	Scythian	86	22	Scythian, or Saiga	ib. 393
23	Corine	89	23	Corine	ib. 401
24	Cervine	90	24	Cervine	vii. 1
25	Senegal	91	25	Senegal, or Koba	vi. 405
26	Gambian	92	26	Gambian, or Kob	ib. 406
	VII. DEER.			VII. DEER.	
1	Elk	93	1	Elk	vi. 315
2	Rain	99	2	Rain-deer	ib. 316
3	Fallow	101	3	Fallow	iv. 113
4	Stag	102	4	Stag	ib. 72
5	Virginian	104			
6	Spotted Axis	105	6	Axis	vi. 230
7	Middle-ſized Axis	106			
8	Great Axis	ib.			
9	Porcine	107			
10	Rib-faced	ib.			
11	Roe	108	11	Roe	iv. 120
	A. Tail-leſs	109			
11	Mexican	110			
12	Grey	111	12	Mexican, or Cariacou	vii. 30
	VIII. MUSK.			VIII. MUSK.	
1	Tibet	112	1	Tibet Muſk	vii. 44
2	Braſilian	114	2	Braſilian, or Cuguacuete	ib. 31
3	Indian	115	3	Indian, or Memina	ib. 28
4	Guiney	ib.	4	Guiney	ib. 27
	IX. CAMEL.			IX. CAMEL.	
1	Arabian	117	1	Arabian	vi. 119
	b. Bactrian	120		*a.* Bactrian	ib. 18
2	Lama	121	2	Lama	vii. 133
3	Pacos	124	3	Pacos	ib. 134
	X. HOG.			X. HOG.	
1	Common	126	1	Common	iii. 500
	a. Guiney	128		*a.* Guiney	viii. 239
					b. Siam

PENNANT's Synopsis.			*BUFFON.*		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
	b. Siam	128		*b.* Siam	iii. 522
	c. Chineſe	129		*c.* Chineſe	ib. ib.
2	Æthiopian	ib.	2.	Æthiopian, or Cape Verd	viii. 241
3	Cape-Verd	132			
4	Mexican	133	4	Mexican, or Pecari	v. 271
5	Baby-rouſſa	134	5	Babirouſſa	vii. 58
	XI. RHINOCEROS.			XI. RHINOCEROS.	
1	Two-horned	136	1	Two-horned	vi. 92
2	One-horned	138	2	One-horned	ib. 116
	XII. HIPPOPOTAME.			XII. HIPPOPOTAMUS.	
1	Hippopotame	142	1	Hippopotamus	vi. 277
	XIII. TAPIR.			XIII. TAPIR.	
1	Long-noſed	148	1	Tapir.	vi. 243
	XIV. ELEPHANT.			XIV. ELEPHANT.	
1	Great	150	1	Elephant	vi. 1
2	American	160			

DIV. II. DIGITATED QUADRUPEDS.

SECT. I. ANTHROPOMORPHOUS.

	XV. A*PE.			XV. A*PE.	
1	GREAT	166	1	GREAT, or Jocko and Pongo	viii. 77
2	Pigmy	168	2	Pigmy	ib. 106
3	Long-armed	170	3	Long-armed, or Gibbon	ib. 112
	a. Leſſer	ib.		*a.* Leſſer	ib. 115
4	Barbary	171	4	Barbary, or Magot	ib. 117
	B A B*O*O N S.			B A B*O*O N S.	
5	Great	173	5	Great	ib. 125
6	Ribbed-noſe	174	6	Ribbed-noſe	ib. 129
7	Wood	176			
8	Yellow	ib.			

9. Cinereous

PENNANT's Synopsis.		*BUFFON.*		
No. *Species.*	*Page.*	No. *Species.*	*Vol.*	*Page.*
9 Cinereous	176			
10 Blue-faced	177			
11 Brown	ib.			
12 Little	ib.			
13 Creſted	178			
14 Pigtail	ib.	14 Pigtail	viii.	137
15 Dog-faced	179			
16 *b.* Urſine	181			
17 Mottled	182	17 Mottled	ib.	121
b. Little	183			
18 Lion-tailed	ib.			
d. Bearded men.	184			
MONKEYS.		MONKEYS.		
19 Purple-faced	ib.	19 Purple-faced, or Ouanderou	viii.	132
20 Palatine	185			
21 Hare-lipped	ib.	21 Hare-lipped, or Macaque	ib.	140
22 Spotted	186	22 Spotted, or Exquima	ib.	184
23 Long-noſed	187			
24 Yellowiſh	188			
25 Green	ib.	25 Green, or Callitrix	ib.	160
26 White-eyelid	189	26 White-eyelid, or Mangabey	ib.	154
27 Muſtache	190	27 Muſtache	ib.	163
28 White-noſe	ib.			
29 Talapoin	191	29 Talapoin	ib.	165
30 Negro	ib.			
31 Egret	192	31 Egret	ib.	140
32 Mone	ib.			
33 Red	193	33 Red, or Patas	ib.	144
34 Chineſe	194	34 Chineſe	ib.	148
35 Bonneted	195			
36 Varied	ib.	36 Varied	ib.	156
37 Cochin China	196	37 Cochin China	ib.	168
38 Tawny	ib.			
39 Goat	197			
40 Full-bottom	ib.			
41 Bay	198			
42 Annulated	ib.			
43 Philippine	ib.			

PENNANT's Synopsis.			*BUFFON.*		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
	AMERICAN.			AMERICAN.	
44	Preacher	199	44	Preacher, or Ouarine	viii. 176
45	*a.* Royal	200	45	*a.* Royal, or Alouate	ib. ib.
46	Four-fingered	201	46	Four-fingered, or Coaita	ib. 184
47	Fearful	202	47	Fearful, or Sajou	ib. 193
48	Capuchin	203	48	Capuchin	ib. ib.
49	Weeper	204	49	Weeper, or Sai	ib. 196
50	Orange	205	50	Orange, or Saimiri	ib. 199
51	Horned	206			
52	Antigua	ib.			
53	Fox-tailed	207	53	Fox-tailed, or Saki	ib. 201
54	Great-eared	208	54	Great-eared, or Tamarin	ib. 203
55	Striated	209	55	Striated, or Ouiſtiti	ib. 205
56	Silky	210	56	Silky, or Marikina	ib. 209
57	Red-tailed	ib.	57	Red-tailed, or Pinche	ib. 211
58	Fair	211	58	Fair, or Mico	ib. 213
	XVI. MAUCAUCO.			XVI. MAUCAUCO.	
1	Tail-leſs	212	1	Tail-leſs	vii. 232
2	Loris	213			
3	Woolly	ib.	3	Woolly	ib. 223
4	Ringtail	214	4	Ringtail	ib. ib.
5	Ruffed	215	5	Ruffed, or Mongous	ib. 226
6	Tarſier	216	6	Tarſier	ib. 171
7	Little	217			
8	Flying	218			

DIV. II. SECT. II. SIMPLY DIGITATED.

	XVII. DOG.			XVII. DOG.	
1	FAITHFUL	219	1	FAITHFUL	iv. 1
2	Wolf	231	2	Wolf	ib. 20
3	Mexican	233	3	Mexican	viii. 258
4	Fox	234	4	Fox	iv. 214
	b. Croſs Fox	ib.		*b.* Croſs	ib. 222
	c. Black Fox	235			
	d. Brant Fox	ib.			
	e. Karagan Fox	ib.			
	f. Corſac Fox	236			
5	Arctic	238	5	Arctic	vii. 268
			6	Antarctic	

PENNANT's Synopsis.			*BUFFON.*		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
6	Antarctic	240			
7	Gray	241			
8	Silvery	ib.			
9	Barbary	242	9	Barbary	vii. 355
10	Schakal	ib.	10	Jackal	ib. ib.
11	Capeſch	246			
12	Surinam	247			
13	Zerda	248			
	XVIII. HYÆNA.			XVIII. HYÆNA.	
1	Striped	250	1	Striped	v. 226
2	Spotted	252			
	XIX. CAT.			XIX. CAT.	
1	Lion	254	1	Lion	v. 64
2	Tiger	257	2	Tiger	ib. 153
3	Panther	260	3	Panther	ib. 167
4	Leopard	262	4	Leopard	ib. ib.
5	Leſſer Leopard	263			
6	Hunting	264	6	Hunting, or Guepard	vii. 249
7	Ounce	265	7	Ounce	v. 167
8	Braſilian	266	8	Braſilian, or Jaguar	ib. 187
9	Mexican	267	9	Mexican, or Ocelot	vii. 243
10	Puma	269	10	Puma, or Couguar	v. 197
11	Jaguar	270	11	Jaguar, or Jaguarette	ib. 190
12	Cape	271			
13	Cayenne	ib.	13	Cayenne	vii. 249
14	Bengal	272			
15	Manul	274			
16	Common	ib.	16	Common	iv. 49
	a. Angora	275		*a.* Angora	ib. 57
	b. Tortoiſe-ſhell	276			
	c. Blue	ib.		*c.* Blue	ib. 56
	d. Long-headed	ib.			
17	New Spain	277			
	LYNX.			LYNX.	
18	Mountain	ib.	18	Mountain, or wild cat of Carolina	vii. 253
19	Serval	278	19	Serval	ib. 241
20	Lynx	279	20	Lynx	v. 206
21	Bay	281			
22	Caſpian	ib.			

No.	*PENNANT's Synopsis.* Species.	Page.	No.	*BUFFON.* Species.	Vol. Page.
23	Perſian	283	23	Perſian, or Caracal	v. 221
	b. Lybian	284		*b.* Lybian, or Caracal of Bengal	ib. 224
	XX. BEAR.			XX. BEAR.	
1	Black	285	1	Black	v. 16
	a. American	286		*a.* American	ib. 19
2	Polar	288	2	Polar	viii. 216
3	Wolverene	291	3	Wolverene	vii. 282
4	Glutton	293	4	Glutton	ib. 274
5	Raccoon	295	5	Raccoon	v. 46
	XXI. BADGER.			XXI. BADGER.	
1	Common	297	1	Common	iv. 226
	b. American	298			
2	Indian	299			
	XXII. OPOSSUM.			XXII. OPOSSUM.	
1	Virginian	301	1	Virginian	v. 404
2	Molucca	303	2	Molucca	ib. 430
3	Javan	305			
4	Kanguru	306			
5	Murine	308	5	Murine	ib. 435
6	Mexican	309	6	Mexican	ib. 438
7	Cayenne	ib.	7	Cayenne, or Crab-eater	viii. 279
8	New Holland	310			
9	Short-tailed	311			
10	Phalanger	ib.	10	Phalanger	vii. 174
11	Merian	312	11	Merian	viii. 267
	XXIII. WEASEL.			XXIII. WEASEL.	
1	Common	313	1	Common	iv. 257
2	Stoat, or Ermine	314	2	Stoat, or Ermine	ib. 262
3	S. Am. fitchet	315	3	Martin of Guiana	iv. 243
4	Fitchet	316	4	Fitchet, or Polecat	ib. 248
5	Sarmatian	317			
6	Siberian	318			
7	Ferret	319	7	Ferret	ib. 252
8	Martin	320	8	Martin	ib. 249
9	Pine	321	9	Pine	ib. 245
10	Sable	322	10	Sable	vii. 309
11	Fiſher	328			
12	Madagaſcar	329	12	Madagaſcar, or Vanſire	ib. 221
13	Pekan	330	13	Pecan	ib. 307
			14	Viſon	

PENNANT's Synopsis.			*BUFFON.*		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
14	Viſon	330	14	Viſon	vii. 307
15	White-cheeked	331			
16	Griſon	ib.	16	Griſon	iv. 266
17	Guiney	332	17	Guiney	viii. 265
18	Guiana	ib.			
19	Woolly	333			
20	Ichneumon	ib.	20	Ichneumon	vii. 210
21	Four-toed	336	21	Four-toed	ib. 166
22	Yellow	337			
23	Mexican	338			
24	Braſilian	340	24	Braſilian	v. 53
25	Stifling	341	25	Stifling	vii. 296
26	Striated	342	26	Striated	ib. 297
27	Skunk	343	27	Skunk	ib. ib.
28	Zorilla	344	28	Zorilla	ib. 298
29	Ratel	ib.			
30	Quoll	345			
31	Blotched	346			
32	Civet	ib.	32	Civet	v. 239
	b. Zibet	348		*a.* Zibet	ib. ib.
33	Genet	349	33	Genet	ib. 254
34	Foſſane	ib.	34	Foſſane	vii. 219
	XXIV. OTTER.			XXIV. OTTER.	
1	Greater	351	1	Greater	iv. 232
2	Braſilian	353			
3	Leſſer	354			
4	Saricovienne	355	4	Saricovienne, or Cayenne otter	ib. 237
5	Sea	356	5	Sea	vii. 321
	DIV. II. SECT. III. Without Canine Teeth.				
	XXV. CAVY.			XXV. CAVY.	
1	Capibara	360	1	Cabiai	vii. 64
2	Reſtleſs	371	2	Reſtleſs, or Guiney-pig	iv. 296
3	Rock	362	3	Rock, or Aperea	vii. 274
4	Patagonian	363			
5	Spotted	ib.	5	Spotted, or Paca	v. 392
6	Long-noſe	364	6	Long-noſed	ib. 58
7	Olive	365	7	Olive	vii. 269
8	Javan	366			

PENNANT's Synopsis.			*BUFFON.*		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
9	Cape	366	9	Cape	iv. 348
10	Muſk	367	10	Muſk	v. 261
	XXVI. HARE.			XXVI. HARE.	
1	Common	368	1	Common	iv. 137
2	Varying	370			
3	American	372			
4	Rabbit	373	4	Rabbit	ib. 155
	b. Angora	374			
	c. Hooded	ib.			
5	Baikal	ib.	5	Baikal	vii. 228
6	Cape	375			
7	Braſilian	376	7	Braſilian	ib. 276
8	Alpine	377			
9	Ogotona	379			
10	Calling	380			
	XXVII. BEAVER.			XXVII. BEAVER.	
1	Caſtor	383	1	Caſtor	v. 21
2	Muſk	388	2	Muſk	ib. 260
	XXVIII. PORCUPINE.			XXVIII. PORCUPINE.	
1	Creſted	390	1	Creſted	vii. 69
2	Braſilian	392	2	Braſilian	ib. 76
3	Canada	394	3	Canada	ib. 83
	XXIX. MARMOT.			XXIX. MARMOT.	
1	Alpine	396	1	Alpine	iv. 339
2	Quebec	397	2	Canada	ib. 346
3	Maryland	398	3	Maryland	ib. ib.
4	Hoary	ib.			
5	Bobak	399	5	Bobak	vii. 198
6	Earleſs	403	6	Earleſs	viii. 229
7	Gundi	405			
8	Quill-leſs	ib.			
	XXX. SQUIRREL.			XXX. SQUIRREL.	
1	Common	406	1	Common	iv. 268
	c. White-legged	407			
2	Ceylon	408			
3	Abyſſinian	ib.			
4	Javan	409			
5	Bombay	ib.			
6	Ruddy	ib.			
7	Gray	410	7	Gray	v. 321
			8	Black	

PENNANT's Synopsis.			*BUFFON.*		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
8	Black	411			
9	Hudſon's Bay	412			
10	Varied	413	10	Varied	vii. 176
11	Fair	ib.			
12	Braſilian	414			
13	Mexican	ib.			
14	Palm	415	14	Palm	v. 328
15	Barbary	416	15	Barbary	ib. ib.
	c. Plantane.	ib.			
	*				
16	Sailing	417	16	Sailing	ib. 312
17	Severn river	418			
18	Flying	ib.	18	Flying	ib. 307
19	Hooded	419			
	XXXI. DORMOUSE.			XXXI. DORMOUSE.	
1	Striped	422	1	Striped, or ground Squirrel	v. 329
2	Fat	423	2	Fat	iv. 325
3	Garden	424	3	Garden	ib. 332
4	Common	425	4	Common	ib. 334
5	Earleſs	426			
	XXXII. JERBOA.			XXXII. JERBOA.	
1	Egyptian	427	1	Egyptian	vii. 201
2	Siberian	429	2	Siberian, or flying hare	ib. 202
	b. Middle	ib.			
	c. Pigmy	430			
3	Cape	432			
4	Torrid	433			
	XXXIII. RAT.			XXXIII. RAT.	
1	Labrador	435			
2	Circaſſian	436			
3	Tamariſk	437			
4	Black	438	4	Black	iv. 275
5	Brown	439	5	Brown	ib. 336
6	American	441			
	b. Curaco	ib.			
7	Water	442	7	Water	ib. 290
8	Mouſe	443	8	Mouſe	ib. 282
9	Field	444	9	Field	ib. 285
10	Harveſt	445			
11	Oriental	446			
12	Barbary	447			
			13	Mexican	

PENNANT's Synopsis.			*BUFFON.*		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
13	Mexican	447			
14	Virginian	ib.			
15	Wandering	ib.			
16	Beech	448			
17	Ruſtic	ib.			
18	Little	449			
	* *			* *	
19	Rock	454			
20	Oeconomic	451			
21	Red	452			
22	Garlic	453			
23	Soracine	ib.			
	* * *			* * *	
24	Leomming	450	24	Lemming	vii. 316
25	Ringed	457			
26	Hudſon's	ib.			
27	Hare-tailed	458			
28	Social	459			
29	Meadow	460	29	Meadow	iv. 293
30	Gregarious	461			
	* * * *			* * * *	
31	Hamſter	ib.	31	Hamſter	vii. 178
32	Vormela	465			
33	Yaik	ib.			
34	Zarizin	466			
35	Sand	ib.			
36	Songur	367			
37	Baraba	368			
	* *			* *	
	* * *			* * *	
38	Blind	469	38	Blind, or Zemni	viii. 232
39	Danurian	471			
40	African	472			
41	Cape	473			
42	Talpine	474			
	XXXIV. SHREW.			XXXIV. SHREW.	
1	Muſky	476	1	Muſky	v. 261
2	Perfuming	477			
3	Mexican	478	3	Tucan	vii. 271
4	Braſilian	ib.	4	Braſilian	ib. 273
5	Murine	479			
6	Fœtid	ib.	6	Fœtid	iv. 305
7	Water	480	7	Water	ib. 308
8	Minute	481			

PENNANT's Synopsis.			*BUFFON.*		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
9	Pigmy	481			
10	White-throated	ib.			
11	Square-tailed	482			
12	Carinated	ib.			
13	Unicorn	ib.			
	XXXV. MOLE.			XXXV. MOLE.	
1	European	483	1	European	iv. 309
	b. Yellow	484			
2	Varying	485	3	Siberian	viii. 238
3	Radiated	486			
4	Long-tailed	ib.			
5	Brown	ib.			
6	Red	487			
	XXXVI. HEDGEHOG.			XXXVI. HEDGEHOG.	
1	Common	488	1	Common	iv. 300
2	Siberian	489			
3	Asiatic	490	3	Asiatic	vii. 86
4	Guiana	491			

DIV. II. SECT. IV. Without Fore-teeth.

	XXXVII. SLOTH.			XXXVII. SLOTH.	
1	Three-toed	494	1	Three-toed	vii. 150
2	Two-toed	496	2	Two-toed	ib. 151
	XXXVIII. ARMADILLO.			XXXVIII. ARMADILLO.	
1	Three-banded	497	1	Three-banded	v. 366
2	Six-banded	498	2	Six-banded	ib. 369
3	Eight-banded	500	3	Eight-banded	ib. 371
4	Nine-banded	ib.	4	Nine-banded	ib. 373
5	Twelve-banded	501	5	Twelve-banded	ib. 375
6	Eighteen-banded	502	6	Eighteen-banded	ib. 377

DIV. II. SECT. V. Without Teeth.

	XXXIX. MANIS.			XXXIX. MANIS.	
1	Long-tailed	504	1	Long-tailed	v. 355
2	Short-tailed	505	2	Short-tailed	ib. ib.

1 Great

PENNANT's Synopsis.			*BUFFON.*		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
	XL. ANT-EATER.			XL. ANT-EATER.	
1	Great	507	1	Great	v. 333
2	Middle	508	2	Middle	ib. 334
3	Striped	509			
4	Leaſt	510	4	Leaſt	ib. ib.

DIV. III. PINNATED QUADRUPEDS.

	XLI. WALRUS.			XLI. WALRUS.	
1	Arctic	514	1	Arctic	vii. 354
2	Indian	517	2	Indian	ib. 370
	XLII. SEAL.			XLII. SEAL.	
1	Common	518	1	Common	vii. 336
2	Mediterranean	520			
3	Long-necked	521			
4	Falkland	ib.			
5	Tortoiſe-headed	522			
6	Rubbon	523			
7	Leporine	ib.			
8	Great	524	8	Great	ib. 340
9	Rough	ib.			
10	Hooded	525			
11	Harp	ib.			
12	Little	526	12	Little	ib. 338
13	Urſine	ib.			
14	Bottle-noſe	531	14	Bottle-noſe, or Sea-lion	ib. 347
15	Leonine	534			
	XLIII. MANATI.			XLIII. MANATI.	
1	Whale-tailed	536			
2	Round-tailed	540	2	Round-tailed	vii. 374
3	Sea Ape	544			

DIV. IV. WINGED.

	XLIV. BAT.			XLIV. BAT.	
1	Ternate	548	1	Ternate	v. 281
2	Rouſſette	ib.			
			3	Rougette	

PENNANT's Synopsis.			*BUFFON.*		
No.	*Species.*	*Page.*	No.	*Species.*	*Vol. Page.*
3	Rougette	549	3	Rougette	ib. 282
4	Spectre	552	4	Spectre	ib. ib.
5	Javelin	553	5	Javelin	vii. 234
6	Leaf	ib.	6	Leaf	ib. 235
7	Cordated	554			
8	Peruvian	ib.			
9	Bull-dog	555	9	Bull-dog	v. 303
10	Senegal	556	10	Senegal	ib. 302
11	Pouch	ib.			
12	Bearded	557	12	Bearded	ib. 305
13	New York	ib.			
14	Striped	558	14	Striped	ib. 306
15	Molucca	ib.	15	Molucca, or Cephalotte	vii. 236
16	Horſe-ſhoe	559	16	Horſe-ſhoe	iv. 324
17	Noctule	ib.	17	Noctule	iv. 322
18	Serotine	560	18	Serotine	iv. 323
19	Pipiſtrelle	561	19	Pipiſtrelle	ib. ib.
20	Barbaſtelle	ib.	20	Barbaſtelle	ib. ib.
21	Common	411	21	Common	ib. 319
22	Long-eared	ib.	22	Long-eared	ib. 322

INDEX.

INDEX.

A

ABUSEID SERAFI gives an erroneous deſcription of the muſk, which is followed by Aldrovandus, vol. vii. page 46. note.

Abyſs. See *Deluge*.

Acara, a kingdom on the Gold Coaſt, produces hinds of an exceeding ſmall ſize, vii. 27. n.

Addas, or Addax, a name for the antilope, vi. 415. 417.

Adil, the ſame with the *chryſeos*, or *lupus aureus* of the ancient Greeks, vii. 255. n.

Adimain, or large ſheep of Senegal and India, deſcribed, 215.

Adive deſcribed, vii. 257. n.; is fond of leather, *ib.*; ſeems to have an involuntary inſtinct for crying when it hears others of the ſame ſpecies cry, *ib.*; is fond of human bodies, 265. n. See *Jackall*,

Ægagropili, a kind of balls found in the ſtomachs of ruminating animals, vi. 441.

Æthiopia, ſaid to be the only country which produces the camelopard, vii. 117. n.

Ætna; ſome account of its eruptions, i. 410.; their effects never extend to the diſtance of three or four hundred leagues, 433. A proof that the fire is lodged in the upper part of the mountain, 437.

Africa, its interior parts as little known to us as to the ancients, i. 148. iii. 133. Circumnavigated in the time of Alexander the Great, *ib.* Accounts of a circumnavigation in the ninth century, 149. This continent probably as rich in gold as Mexico and Peru, 152. Remarkable for the variety of people it contains, iii. 194. Produces fewer lions now than formerly, v. 66. Produces a greater number of elephants than Aſia, vi. 37. None of the South American animals found there, vii. 177.

African ſheep deſcribed, vi. 212. n. Perhaps the *adimain* of Leo Africanus, *ib.*

African goat the ſame with Seba's American ſtag, vii. 39.
African ſtag with reddiſh hair, vii. 24.
Agouti, or long-noſed cavy deſcribed, v. 58. Is a voracious and cunning animal, *ib.*; bites fiercely, and is very miſchievous, 59. Produces two or three at a time, 60. Peculiar to the ſouthern parts of America, *ib.* A ſimilar ſpecies called *agouchi*, 61. Erroneouſly deſcribed by Marcgrave, whoſe error has been followed by all other writers but Briſſon and Buffon, *ib.* Is the moſt common quadruped in Guiana, 62.
Agricula deſcribed, vii. 36. n.
Ai, the Braſilian name of a ſpecies of ſloth, derived from its voice, vii. 151. n.
Aiotochtli, the Mexican name of the armadillo, v. 138.
Air ſubjected to the action of a number of powers, vi. 256.
Akouchi, or olive cavy deſcribed, viii. 269. Differs but little from the agouti, *ib.* Reckoned among the fineſt game in South America, 270.
Alagtaga, the Tartarian name of a ſpecies of jerboa, vii. 202. n. The animal deſcribed, 204.
Albours, a famous volcano near Mount Taurus, i. 413.
Alce. See *Elk*.
Alco, the Mexican or Peruvian dog, deſcribed, viii. 261. A ſpecies lives wholly on crabs and cruſtaceous animals, 260.
Aldrovandus copies an error of Abuſſeid Serafi in deſcribing the muſk, vii. 46. Follows Geſner in deſcribing the porcupine, 74. Has given an erroneous figure of a ſow-badger, v. 4.
Alexander the Great was the firſt European who mounted an elephant, vi. 29.
Alexandrians keep tame ichneumons, vii. 216. n.
Algazel, the Arabic name of a ſpecies of antilope, vi. 407. The ſame with the Aleppo gazelle.
Alicant dog, iv. 41.
All Saints Bay, abounds with ſmall ugly monkeys, viii. 197. n.
Allocamelus of Geſner, the ſame with the lama, vii. 136.
Alouate, or king of the monkeys, a variety of the ouarine, viii. 176. n. A ſavage animal, and makes a horrid noiſe, 178. n.
Alpague vicuna, vii. 134. n.
Amahut, the Indian name of a tree on which the ſloths live, vii. 157. n.

Amadabad; three hoſpitals for animals in that city, viii. 151. Strange relation of the behaviour of the monkeys in that neighbourhood, *ib.*

Amazon river runs more than 1000 leagues, i. 268. Receives more than 60 conſiderable rivers, 273. Its courſe deſcribed, 319. The Indians who dwell on its banks are fond of the fleſh of monkeys, viii. 179.

Ambergris ſuperſeded the uſe of civet, and has itſelf ceaſed to be admired as a perfume, v. 253.

America much infeſted with volcanoes, i. 416. Produces none of the animals common in the warm parts of the Old Continent, vii. 77. Produced no horned cattle ſimilar to thoſe of Europe, till they were imported, v. 96; nor ſheep nor goats, 99; wild boars, nor domeſtic hogs, 100; nor dogs nor cats, 103. 107.

American ſavages deſtitute of the principle of love, v. 130, 131.; may be conſidered as a new race of men, iii. 188. v. 139.; make a kind of balls of ſeals ſkin, which they uſe as rafts, vii. 347.

Andira guacu, v. 283. n.

Animalcules in ſemine maſculino. See *Generation.*

Animals; analogies between them and vegetables, ii. 1. Diſtinguiſhed from vegetables by ſenſation, 6. Uncertain whether brutes have ſenſation or not, 7. Exceed plants in the number of ſpecies, 9. Differ more from each other than plants, *ib.* Diſtinguiſhable from each other by their manner of copulation, 10. Of their reproduction. See *Reproduction.* Their nutrition. See *Nutrition.* Their generation. See *Generation.* Account of the idea conveyed by the word *animal*, ii. 216. Large animals leſs prolific than ſmall ones, 255. Thoſe which produce but one at a birth, acquire nearly their full growth before they are capable of propagation, 257. Many animals propagate rather by a kind of compreſſion than copulation, 259. Difference among them with regard to ſexes, 260. Alterations which happen in the body, as preparatives to generation, 261. See *Organic matter.* Diverſities with regard to their teeth, 456. Animals furniſhed with hands ſeem to have the moſt ſagacity, iii. 46. 292. Such as have no hands, cannot have any idea of magnitude, and therefore are often terrified, iii. 46. A diſſertation on their nature, 208. Animals have ſome ſenſes of exquiſite acuteneſs; but

in general they are not all equal to man, 229. Their feelings more exquiſite than thoſe of man, 238. Of domeſtic animals, 301. Animals vary according to the different climates in which they live, 356. Of their degeneracy, 407. Cruelly treated by man, 426. Females more uſeful than males, 434. Moſt of them ſuperior to man in agility, ſwiftneſs, ſtrength, and courage, iv. 5. Changes produced on them by education, 60. Large animals fewer in number than ſmall ones, 65. Of wild animals, 66. Are leſs fierce in cold countries, 68. Are the leaſt ſubject to changes or variations of any kind, 71. Their faculties perpetually diminiſhing, 73. Of carnivorous animals, 164. Theſe are but few in number, *ib.* Some of them deteſt ſharp cries, v. 52. Of thoſe peculiar to the Ancient Continent, 90. A liſt of them, 111. Of thoſe peculiar to the New World, 112. Of thoſe common to both Continents, 123. Not above 200 ſpecies of them exiſting on the earth, 146. Remarks on the ridiculous methods of claſſing them, 147. Thoſe of America proved to be diſtinct from the animals of the Ancient Continent, v. 112. Domeſtic animals differ conſiderably from wild ones of the ſame ſpecies, vi. 155. Animals in general grow torpid, and avoid each other, in winter, vii. 90. The unity of ſpecies more fixed in large than in ſmall animals, 98. Animals in general more happy than men, 156. Notices of ſome which are not expreſsly mentioned in the book, viii. 216. An anonymous animal of Lybia deſcribed by Mr. Bruce, 283.

Ant-eater deſcribed, v. 333. Three ſpecies of them; the great, the middle, and the leaſt, *ib.* A fourth mentioned by Briſſon, from Seba, but ſeems to be ſuſpicious, 338. Six ſpecies mentioned by Seba, *ib.* The great ant-eater fights terribly with his fore-feet, and is almoſt invincible when he lies on his back, and uſes all the four, *ib.* Dr. Maudhuit's deſcription of the great ant-eater, 347. M. de la Borde's obſervations concerning it, 348. His deſcription of the middle ant-eater, 350; and of the leaſt ant-eater, 352.

Anta, a kingdom of Africa, produces great numbers of elephants, vi. 35. n.

Anta, a name for the tapir, vi. 243. n. Eats a kind of clay in the night, 246. n. Is dazzled by the light of torches, and eaſily taken, 247. n.

Ante, another name for the tapir, vi. 244. n.

Antilopes; thirteen different ſpecies of them, vi. 393. The common antilope deſcribed, 412. Indian antilopes have more ſpirit than thoſe of other countries, 414. n. All the different kinds of them found in Aſia and Africa, 415. Difficulty of arranging them, 416. The larger kinds more common in Africa than India, 422. The eyes of thoſe in the neighbourhood of Alexandria ſo beautiful, that they are ſpoken of figuratively in praiſing the eyes of the ladies, 423. n. The different kinds particularly deſcribed, vii. 1. *et ſeq.*

Antiparos; Tournefort's deſcription of a remarkable cavern in that iſland, i. 452.

Appennine mountains abound with porcupines, vii. 73.

Aper in India, vii. 58. n.

Aper Mexicanus, v. 272. n.

Aperea, viii. 274. n.

Aperea Braſilienſibus, v. 119. n.

Apes imitate the actions of men completely, iii. 46. This imitation proceeds not from their genius, but merely from their organization, 280. Their bad character, vi. 3. Their nomenclature, viii. 39. Definition of an ape, *ib.* The ſame with the *pithecus* of the Greeks, and *ſimia* of the Latins, 40. The ape called ourang-outang very much reſembles man, *ib.* The name of *ape* ought to be given to an Eaſt Indian animal called gibbon, 41. Several ſpecies of apes in Senegal, 45. n. The whole may be reduced to 30 ſpecies, 51. Apes of Guiney deſcribed, 83. Are very fond of women, 84. Deſcription of an ape which exactly reſembled an infant, 115. Ape of Barbary deſcribed, 117. See *Barbary Ape*, and *Magot*. Four ſpecies of apes found in Malabar, 135. The white apes firſt raviſh women and then ſtrangle them, *ib.* n. Immenſe numbers found in Africa, from Arquin to Sierra Leona, 146. A very beautiful ape of Guiney deſcribed, 167. n.

Apoſſums, v. 405. n.

Aquiqui, viii. 176. n.

Arabata, a kind of American monkeys, make an horrid noiſe, viii. 179. n.

Arabia Petræa, exceedingly deſtitute of water, i. 477. vi. 124. 127.

Arabians ſaid to have invented the mariner's compaſs, i. 153. Their ſtature, complexion, &c. iii. 109. Marmol and Boulaye's

account of them, 110. Remarks on them by another traveller, *ib.* Their horſes the moſt beautiful, iii. 757. Their deſcent, way in which they are treated, ſwiftneſs, &c. 365. *et ſeq.* Surmount many difficulties by means of their camels, vi. 128. Firſt took notice of the muſk, vii. 45.

Archipelago Iſlands, only the tops of mountains, i. 448. Their inhabitants excellent ſwimmers and divers, iii. 125.

Arctic dog. See *Iſatis.*

Aral, a ſalt-water lake near the Caſpian Sea, deſcribed, i. 328.

Arequipa, a celebrated American volcano, i. 416.

Argali, or Siberian ſheep, deſcribed, vi. 222. n. Monſtrous ſize of the horns, 223. Young foxes very frequently take ſhelter in them when knocked off, *ib.*

Aries piloſus, vi. 212. n. Guineenſis ſive Angolenſis, vi. 212. n.

Aries laniger, vi. 208.

Ariſtotle, the only ancient writer on zoology who merits attention, pref. 1. His Theory of generation, ii. 71. A miſtake of his concerning the ſeminal fluids of women, 241. Aſſerts that there were no aſſes in Scythia, 417. That they degenerate in cold climates, *ib.* His remarks concerning the copulation of animals of different ſpecies, iv. 28. His account of the lion, v. 73. 79. His errors copied by other natural hiſtorians, *ib.* Makes no mention of the tiger, v. 87. His remarks on the bubalus, vi. 163. His bonaſus the ſame with the biſon of the Latins, 168. His deſcription of an animal called the hippelaphus, vi. 236. Applies almoſt equally to the raindeer, and ſtag of Ardennes, *ib.* Makes no mention of the camelopard, vii. 110. Makes mention of ſix amphibious animals, of which only three are now known, 325. Was acquainted with the ſeal, 342. Obſerves that no animal poſſeſſed of crooked, or retractile claws, is ſocial, 436. His aſſertions concerning the copulation of mules, viii. 15. His remarks concerning pigmies, 106.

Armadillo deſcribed, v. 361. Six different ſpecies of it, 365. Three banded armadillo, 366. Six banded, 369. Nine banded, 373. Twelve banded, 375. The laſt is the largeſt of the genus, *ib.* Eighteen banded, 377. Called alſo the weaſel armadillo, *ib.* Miſtakes of Linnæus concerning this animal, 379. The cruſt is a real bone compoſed of ſeveral pieces, 383. Theſe creatures are not afraid of the bite of a rattleſnake, 386.

Aſia may be reckoned the moſt ancient country in the world, i. 32. Volcano's very numerous there, 413. Beauty of the Aſiatic women, iii. 123. Produces none of the South American animals, vii. 77.

Aſs deſcribed, iii. 398. Has the appearance of a degenerated horſe, *ib.*; but is not ſo in reality, 411. Entirely different from the horſe in his diſpoſition, 412. Leaſt infeſted with vermin of all quadrupeds, 414. The female exceedingly laſcivious, 415. Directions with regard to their breeding, *ib.* Different races of them, 416. Account of their migrations, 417. Of the wild aſſes, 419. None found in America, 420. Aſſes fleſh more diſagreeable than that of horſes, 421. The ſkin applicable to many purpoſes, 422. They can carry more weight, in proportion to their bulk, than any other animal, *ib.* Deſcription of a very beautiful aſs ſent to the Grand Seignior from Æthiopia, vi. 270. n. Theſe animals are now almoſt equally diffuſed all over the globe, 272. An aſs deſtroys the generation of a horſe; but the reverſe does not take place, vii. 419. Has a tendency to ſterility, 423. 425. Rules concerning the propagation of aſſes, 425. Aſſes leſs fertile than mares, viii. 23. Means to be uſed to make them conceive, *ib.*

Aſſapanick, a name for the flying ſquirrel, v. 307.

Avicenna's account of the muſk, vii. 46. n.

Axis, Sardinian hind, or ſtag of the Ganges, deſcribed, vi. 230. 238. Is found in Barbary, and is probably the ſame with the ſpotted fallow-deer of the Cape of Good Hope, 233. Forms an intermediate ſhade between the ſtag and fallow-deer, *ib.*

Azore Iſlands, only the tops of mountains, i. 448.

B

Babirouſſa, or Indian hog, deſcribed, vii. 58. Has prodigious tuſks; yet is leſs formidable than the wild boar, 60. Is an excellent ſwimmer, 61.

Baboon differs very much from an ape, v. 121. Called *papio* by the *Latins*, 233. Has been miſtaken for the hyæna, *ib.* The animal deſcribed, viii. 121. Is a ſtrong and ferocious

animal, *ib.* 126. Is exceſſively laſcivious, 123. Great baboon deſcribed, 126. Deſcription of the ribbed-noſe baboon. See *Mandril.* Of the pig-tailed baboon. See *Maimon.*

Badger deſcribed, iv. 226. An unſocial animal, who ſpends three-fourths of his life in his dark abode, *ib.* Is obliged to leave his hole by the fox, 227. Defends himſelf furiouſly when purſued by dogs, *ib.* Is an exceeding ſleepy animal, 228; and remarkably cleanly, *ib.* Cannot bear cold, 229. Is ſubject to the itch, *ib.* Two ſpecies mentioned by Dufouilloux; but this ought to be conſidered as a vulgar error, 230. Badgers perhaps exiſt in America, *ib.*; but not in Aſia or Africa, 231. Was unknown to the Greeks, *ib.* Approaches to no other ſpecies of quadrupeds, *ib.*

Baikal, a great lake of Aſia, deſcribed, i. 335.

Baikal hare. See *Tolai.*

Baltic Sea ought to be regarded as an immenſe lake, ſupported by a great number of rivers, i. 292.

Barbary horſes deſcribed, iii. 357.

Barbaſtelle. See *Bat.*

Baris, or barris, a kind of orang-outang, viii. 81. n.

Barrere's notions concerning the formation of downs, mountains, and the duration of the ſea upon the earth, i. 498. His opinion concerning the formation of mountains controverted, 500.

Bat deſcribed, iv. 317. A monſtrous animal, 318. The bats fly awkwardly, and with difficulty; yet ſeize flies, gnats, and eſpecially moths, during their flight, 319, 320. A vaſt quantity of their dung found in a cavern by M. Buffon, 320. Are viviparous animals, and will even carry their young when flying, 321. Sleep during the winter, and at any time can remain ſeveral days without food, *ib.* There are ſeven ſpecies, 322. All the ſpecies deſcribed, 322. 324. Ternate bat deſcribed, v. 281. There are two ſpecies of Ternate bats; the leſſer of the ſize of a crow, and the larger as big as a large hen, 284. Theſe large bats are very miſchievous, and often wound people in the face, 286. Probably furniſhed the ancients with the notion of harpies, *ib.* Theſe creatures will intoxicate themſelves with palm wine, 288. Are very numerous in the iſlands of Manilla, where the natives kill them for food, *ib.* n. The American bats can ſuck the blood of ſleeping

ing men and cattle, without waking them, 289. Their fleſh taſtes like that of the hare, 291. The foregoing deſcription, according to M. de la Nux, is exaggerated, 291. His account of them, 292. Are not carnivorous, 300. Senegal bat deſcribed, 302. Bull-dog bat, 303. Bearded bat, 305. Striped bat, 306. Javelin bat, vii. 234.

Bear deſcribed, v. 1. Two kinds, the land and ſea bear, or the white bear of the frozen ſea, *ib.* The land bears diſtinguiſhed into the brown and black, 2. Brown bear deſcribed, *ib.* Black bears are not carnivorous, 3. A red kind of bears are as carnivorous and voracious as wolves, 4. Three kinds of bears in Norway, *ib.* One of theſe ſpecies ſaid to feed on ants, 5. Bears are found in all rude and deſert countries, 6. Are ſavage and ſolitary animals, 7. Are not torpid during the winter, though they paſs part of that time without proviſions, *ib.* The males of the brown ſpecies devour the cubs, 8. In the northern countries, the bears are ſaid to be intoxicated by throwing ardent ſpirits on honey, after which they are eaſily taken, 11. In Canada and Louiſiana they live in decayed trees, and have their habitations 30 or 40 feet high, *ib.* Method of purifying their greaſe, 12. Bears are excellent ſwimmers, 13. Enjoy, in an exquiſite manner, the ſenſes of ſeeing, hearing, and feeling, 14. Have ſome groſs reſemblances to man, *ib.* Accounts of ſome domeſtic bears, 15. Cannot endure each other's ſociety, unleſs brought up together from their earlieſt infancy, 17. Difference between an European and American bear, 19. White or Polar bear deſcribed, viii. 216. Is falſely ſaid to be more dangerous than the other kind, 221. Feeds commonly on ſeals, 223. Has the bones of the head ſo hard, that no blow of a club can bring him to the ground, 224.

Beaver deſcribed, v. 21. Is ſaid to be among quadrupeds what the bee is among inſects, 22. Has no pretenſions to rationality, 24.; on the contrary, he is conſiderably inferior to ſome animals, 26, 27. Account of their method of operating and building their huts, 28. When a ſociety is ruined by hunters, the reſt diſperſe and become vagabond, 36. Some of theſe creatures are ſolitary, of which kind are all the European beavers, 39. It hath been falſely aſſerted, that the beaver cannot live upon land without water, 41. Accounts of

a tame beaver, 26. 41. Beavers are enemies to the otter, 42. The perfectly black and perfectly white furs moſt eſteemed, 43. This animal furniſhes the caſtoreum, *ib.* See *Caſtoreum.* Beavers can be ſo effectually tamed, that they will fiſh for their maſters, 45. Having received from Nature a gift almoſt equal to that of ſpeech, vi. 4.

Bedas, a race of Ceyloneſe ſavages deſcribed, iii. 100. Are a peculiar race of men, *ib.* 180.

Bees; an eulogium on them, iii. 283. Our admiration of them ill founded, 284. The genius of ſolitary bees inferior to that of the gregarious ſpecies, 285. Bees, taken ſeparately, have leſs genius than many other animals, *ib.*; why they act in concert with one another, 286. The hexagonal cells of the bee furniſh an argument of its ſtupidity, 290. Bees are not more ingenious than waſps, hornets, &c. 292. The proviſions of the bee and other induſtrious animals, are only uſeleſs and diſproportioned maſſes, 297.

Behemoth, the Hebrew name of the hippopotamus, vi. 277. n.

Beori, vi. 244. n.

Bergen; vaſt numbers of raw hides exported from thence, vi. 499.

Bezoar, ſaid to be the production of one ſpecies of animals only, vi. 424.; but without ſufficient reaſon, 426. 431. A kind of bezoar from apes, 429.; different from the true bezoar, 430. The true kind deſcribed, *ib.* It is found in a great number of different animals, 432. Moſt quadrupeds, and even crocodiles and large ſerpents, produce a kind of bezoars, 440.

Birds; their ſagacity and foreſight ariſe merely from inſtinct, iii. 297. Inſtead of knowing the future, they are ignorant even of the paſt, 298. Why domeſtic poultry make neſts worſe than wild fowls, *ib.*

Biſon Jubatus, vi. 151. The biſon is not properly a diſtinct ſpecies of animal, 154. 157. 172. 188. Origin of the word *biſon*, 157. The biſon of the Latins the ſame with the bonaſus of Ariſtotle, 168. Biſon of America might proceed originally from the European biſon, 170. Biſons vary greatly in ſize, &c. 185. They have degenerated in America, 187.

Black Sea receives more water from the rivers which run into it than is ſufficient for its ſupport, i. 36. Might have formerly been only a large lake joined by a narrow communication to the Caſpian, *ib.* Ought ſtill to be conſidered rather as a lake than

than a gulf of the ocean, 38. Is the only ſea that freezes totally; and why, 47. Its direction ſimilar to that of rivers, 253. According to Diodorus Siculus, it was originally a great lake or river, 323. A notion of M. Tournefort's concerning it refuted, *ib.* Receives more rivers than the Mediterranean, 325. Is leſs clear and ſalt than the ocean, 327. Its tempeſts more violent and dangerous, *ib.*

Black cattle fond of licking themſelves, by which means balls of hair are formed in their ſtomachs, iii. 455.

Blind mouſe. See *Water ſhrew.*

Boar. See *Wild Boar*, and *Ethiopic* and *Cape Verd boar.*

Bobak deſcribed, vii. 198.

Bonaſus, vii. 150. The ſame with the biſon of the Latins, 168.

Bonaviſta: An incredible number of goats on that iſland, iii. 493.

Bones; the manner in which they grow, ii. 473. Analogy between their growth and that of wood, 474. Become more ſolid as we advance in years, 477. Are ſofter in women than in men, *ib.*

Bos, iii. 423. n. vi. 151. n.

Boſner, an Eaſt Indian iſland, where much bezoar is found, vi. 437. n.

Boſphorus will, in time, probably, be filled up, i. 323.

Bouc eſtian, vi. 363. n. Bouc ſavage, *ib.*

Bourguet gives a ſpecimen of a theory of the earth, but would probably not have ſucceeded had he gone on with it, i. 122. Firſt remarked the regularity of the angles of mountains, 240. See *Mountain.*

Brain cannot be the fountain of ſenſation, iv. 173. Is only a ſpecies of mucilage, and hardly organized, 174. Is an organ of ſecretion and nutrition, 175. Is not proportionally larger in man than other animals, 176. Ought not to be regarded as an organic part of the nervous ſyſtem, 177. Why the compreſſion of it deſtroys ſenſation, *ib.* Facts which ſhew that the brain is not the organ of ſenſation, *ib.*

Braſilian cat. See *Jaguar.*

Braſilian weaſel. See *Coati mondi.*

Britain formerly a part of the Continent, i. 489. 491.

Brittany, a province in it overwhelmed with ſand, 508.

Brocks, a name for young deer, when their horns begin to be viſible, iv. 87.

Brutes. See *Animals*.

Bubalus, or cervine antilope, deſcribed, vii. 1. The name improperly given to the buffalo by the modern Latins, vi. 152. vii. 1. Reſembles the ſtag, the gazelles, and the ox, 2.; hath but little reſemblance to the elk, 4.; hath been called the *Barbary cow*, *ib.* Deſcribed by Caius, under the name of *Buſelaphus*, 6.

Bucks, vi. 384. n.

Buffalo deſcribed, vi. 159. Has no name either in Greek or Latin, *ib.* n. Is a native of the warm regions of Africa and the Indies, and was not tranſported into Italy till the ſeventh century, 152. Miſtake of Belon concerning it, *ib.* Refuſes to copulate with our common black cattle, 192. Is the dirtieſt of domeſtic animals next to the hog, *ib.* The milk of the female buffalo is worſe than that of the cow, but yielded in larger quantity, 193. The ſkin is of more uſe than the fleſh, *ib.* Very robuſt buffaloes in the kingdoms of Aunau and Tonquin, 195. n. Are very dangerous when attacked and wounded, 196. The ſight of the buffaloes at the Cape of Good Hope is bad, 203.

Buffle, vi. 150. n.

Buffon holds the moſt diſtinguiſhed rank among natural hiſtorians, *Pref.* xi. His meaning ſtrangely miſrepreſented by a former tranſlator, *Pref.* xvii. n.

Bull-dog, iv. 40.

Burnet's Theory of the Earth, i. 109. See *Earth*. Gives neither facts nor obſervations in ſupport of his theory, 119. Falls into an error with regard to the deluge, 127. See *Deluge*.

C

Cabiai, or thick-noſed tapir, deſcribed, vii. 64. Cannot live in a cold climate, 65. This aſſertion contradicted, 67. Has ſome ſlight relations to the hog, *ib.*; eſcapes from hunters by taking the water, *ib.*; a peaceable animal, and a native of South America, 66.

Caby-bara, vii. 64. n.
Cagui, viii. 201. n. 205. n. 209. n. 211. n. 214. n.
Cajeta; a mountain curiouſly ſplit by an earthquake near that place, i. 455.
Caitaia, viii. 199. n.
Calicut, formerly a celebrated city, now decayed, and moſtly covered with the ſea, i. 495. The women there have ſometimes ten huſbands, iii. 99. The inhabitants lengthen their ears to ſuch a degree, that they ſometimes hang down below their ſhoulders, *ib.* Their legs ſometimes as thick as the body of an ordinary man, *ib.* People with ſuch thick legs alſo found in other places, 100.
Callitrix, or green monkey, deſcribed, viii. 160.; found in Mauritania and the territories of ancient Carthage, *ib.*
Calmar; Needham's obſervations on the milt of that fiſh, ii. 62. 186. Animalcules in it of an extraordinary ſize, 186. Some bodies diſcovered in it like ſpiral ſprings, *ib.* Particular deſcription of theſe bodies, 187, 188.
Calmuck Tartars deſcribed, iii. 68.
Camel deſcribed, vi. 118. Two ſpecies of that animal, *ib.* n. The Perſians have ſeveral kinds, 120. n. The Perſian Ambaſſador's account of the camel to M. Conſtance, 122. n. The whole ſpecies limited to a zone of three or four hundred leagues in breadth, 123. A native of Arabia, *ib.* Camels can live ſeveral days without drink, 124. Are of vaſt uſe to the Arabs, 126. Can travel 50 leagues in one day, 127. Camels can ſmell water at the diſtance of half a league, 131. Why they can live ſo long without drinking, 134. Their nature conſiderably changed by conſtraint, ſlavery, and labour, 135. Exiſt no where in a natural ſtate, 138. Are guided by the ſound of the human voice, or ſome inſtrument, 139. Become furious during the rutting ſeaſon, 140. Are more valuable than elephants, 145. Method of preſerving their fleſh for food, 146. n. Their dung makes excellent fewel, 147. Might be made to live and be uſeful in other countries, 148.
Camelus, vi. 118. n. 119. n. 122. n. vii. 133. n.
Camelopard deſcribed, vii. 109. One of the largeſt and moſt beautiful of quadrupeds, *ib.* The ſpecies confined to the deſerts of Æthiopia, and ſome provinces in the ſouth of Africa and India, 110. Belon's deſcription of the camelopard, 112.

Gillius's deſcription, 113. Haſſelquiſt's deſcription cenſured, 115. 122. Mr. Allamand's deſcription of the horns, 123. His deſcription of the whole animal, 129. The length of its fore legs miſrepreſented, 129.
Camelopardalis, vii. 112. *et ſeq.*
Campagnol, iv. 293. n.
Canis, iv. 196. n. 214. n. 226. n. vii. 25. n. 268. n. viii. 264. n. 279. n.
Cape of Good Hope, famous for its tempeſts, i. 390. Account of the manner in which they are produced, *ib.*
Cape Verd boar deſcribed, viii. 241. A different race from all other hogs, 243. Account of one kept in the menagery of the Prince of Orange, *ib.* Refuſed to copulate with a ſow, and tore her in pieces, 244. M. Voſmaer's account of another tame one, 245. Digs the earth with ſurpriſing eaſe and quickneſs, *ib.* The animal may, perhaps, be a variety of the common hog, 250. M. Comerſon's account of boars in the iſland of Madagaſcar, 251. Mr. Allamand's deſcription of the Cape Verd boar, 251. Runs much more ſwiftly than the common hogs, 255. Mr. Adanſon's deſcription of an African boar, 256. There may, perhaps, be another ſpecies which Adanſon means to deſcribe, 257.
Capivard, vii. 64. n.
Capra, iii. 486. n. iv. 120. n. vi. 363. n. 364. n. 394. n. 407. n. 408. n. 419. n. vii. 14. n. 38. n. 44. n.
Capreolus, iv. 120. n. vii. 44. n.
Capriolus, iv. 120. n.
Capricorne, vi. 363. n.
Capybara, v. 116. n.
Caracal deſcribed, v. 221. Is different from the lynx, *ib.* Is common in Arabia, Barbary, &c. 222. Is obliged to content himſelf with the remains of a lion's, or other wild beaſt's meal, *ib.* Why he hath been called the lion's provider, *ib.* Is about the ſize of a fox, but much ſtronger and more ferocious, 223. May be trained to hunting, *ib.* Mr. Bruce's deſcription of a Nubian caracal, 224. This ſpecies no larger than a common cat, 225.
Cardites found in vaſt numbers in ſome places, i. 221.
Caribbees deſcribed, iii. 175.
Caribou, vi. 328. n.
Carigueya, v. 119. n. 405. n.

Carmel; ſome curious petrefactions found on that mount, i. 207.
Carnivorous animals. See *Animals*.
Caſpian Sea is a real lake, and communicates with no other ſea in the world, i. 37. Is repreſented as nearly round in ancient charts, 253.
Caſtor, v. 21. n. 260. n. 261. n.
Caſtoreum, a ſubſtance found in the body of the beaver, and uſed in medicine, v. 43. Hath a very offenſive ſmell, 270.
Cat deſcribed, iv. 49. Is extremely amorous, and the female more ſo than the male, 51. The male has an inclination to devour the young, *ib.*; which the female will ſometimes do, 52. In Cyprus, the cats were trained to hunt ſerpents, *ib.* Phyſical cauſe of the cat's watching, 53. Theſe animals cannot be entirely tamed, *ib.* Are extremely hardy and vivacious, 55. Wild cat deſcribed, *ib.* Wild cats found in all countries of the world, 56. Pietro della Valle's deſcription of a ſpecies of Perſian cats, *ib.* Have a perfect reſemblance to the cat of Angora, 57. Whence the beauty of theſe cats proceeds, *ib.* Father Tertre's deſcription of American cats, 59. Cats ſometimes ſleep ſo profoundly, that they can ſcarce be awaked, 63. Sometimes their breath hath an odour of muſk, 64. Chineſe cats have pendulous ears, *ib.* Some cats obſerved in France with pencils of hair at their ears, 65. Deſcription of the lion by the name of *cat*, &c. v. 64. n.
Catanea deſtroyed by an earthquake in 1683, i. 411.
Cataract. See *Cheſelden*.
Catus, iv. 49. n.
Caverns; diſſertation on them, i. 442. Are in a manner peculiar to mountains, 450. Frequent in the Archipelago Iſlands, *ib.* Deſcription of the cavern in Derbyſhire, called the *Devil's Hole*, 451. Of the cavern in Antiparos, the cave of Trophonius, and ſeveral others, 452, 453. Caverns are frequent in all countries infeſted with volcanoes and earthquakes, 454. The labyrinth of Crete is a natural cavern augmented by art, *ib.*
Cavia, iv. 296. n. v. 392. n. vii. 83. n.
Cavy a name for the Guiney-pig, iv. 296. n. Long-noſed cavy. See *Agouti*. Spotted cavy. See *Paca*.
Cay, viii. 196. n.
Caymiri, viii. 199. n.

Cayopollin, v. 438. n.
Cayouaſſou, vii. 193, n.
Cemas, vi. 410. n.
Cephos, viii. 113. n.
Cerf, vii. 8. n.
Cerigo; an iſland which abounds in porphyry, i. 206.
Cercopithecus, viii. 129. n. 140. n. 141. n. 160. n. 163. n. 168. n. 176. n. 184. n. 193. n. 196. n. 199. n. 201. n. 203. n.
Cervus, iii. 74. n. 113. n. 120. n. vi. 316. n. 317. n. viii. 31. n. 32. n. 110. n. 114. n.
Ceylon ſaid to have been ſeparated from the peninſula of India by an earthquake, i. 488. 496. Account of the natives, iii. 100.
Chacal, vii. 255. n.
Changes of land into ſea, and ſea into land, i. 483.
Chameau, vi. 119. n.
Chamois goat deſcribed, vi. 363. See *Goat*.
Charlevoix's deſcription of the cataract of Niagara, i. 280. See *Niagara*.
Chat, vii. 77.
Cheſelden's account of a man affected with a ſtrabiſmus, in conſequence of a blow, iii. 6. Of a lad whom he cured of a cataract, 9.
Chevre, iii. 486. n.
Chevrotains or ſmall antilopes deſcribed, vii. 23. Have a reſemblance to the ſtag, but differ from him prodigiouſly in ſize, *ib.* Different ſpecies of them deſcribed, 23. Hinds of the ſize of a hare found in the Eaſt Indies, 26. n. Exceeding ſmall ones found in ſome parts of Africa, 27. n. Are very eaſily tamed, *ib.* There are only two ſpecies of them known, 28. Are ſo delicate that they can ſcarce be tranſported to Europe, and ſoon die there, *ib.*
Chimpanzee, viii. 77. n.
Chinche, vii. 297. n.
Chineſe deſcribed, iii. 71.
Chineſe bonnet, viii. 148. A variety of the macaque, *ib.* Found in the Eaſt Indies, 149. Their method of ſtealing ſugar canes, *ib.* Diſtinctive characters of the ſpecies, 153.
Circaſſia produces very beautiful women, iii. 119.
Circumciſion, a very ancient cuſtom, ii. 401. How practiſed in Perſia, the Maldivia Iſlands, &c. 402.

Civet deſcribed, v. 239. Two ſpecies of the animal, 240. Has nothing in common with the cat but agility of body, 243. Deſcription of the perfume called civet, *ib.* This muſt not be confounded with the muſk, *ib.* The two ſpecies of civets have never been properly diſtinguiſhed, 244. The civets, though originally natives of Africa and Aſia, can live in temperate, and even cold countries, 249. Great numbers of civets kept in Holland, *ib.* Manner of collecting the perfume, 250. Exceeding ſtrength of civet as a perfume, 251. Theſe animals naturally ſavage, and even ferocious, 252. Civet now little uſed, 253. Account of a civet kept at Fort Mine, on the African coaſt, *ib.*

Civette, v. 239. n.

Clay perfectly analogous with ſand, i. 184.

Coaita, a ſpecies of monkey deſcribed, viii. 184. Cannot bear cold, 185.

Coal mines ſometimes take fire, but never burn like volcanoes, i. 441.

Coati, or Braſilian weaſel, deſcribed, v. 53. Two varieties of the ſpecies, *ib.* Difference between the coati and the racoon, 54. This animal, by ſome, confounded with the ſow-badger, *ib.* Miſtake of Aldrovandus concerning it, *ib.* The coati has a cuſtom of gnawing the extremity of his own tail, 55. Inferences from this fact, *ib.* Is an animal of prey, 56.

Coati-mondi, a name given by ſome authors to the coati, v. 53. Is a variety of the ſame ſpecies, *ib.* Account of one kept by Linnæus, 56. Has an unaccountable averſion to hog's briſtles, *ib.* Is a very ſleepy animal, 57.

Cochon d'eau, vii. 64. n.

Cockles; vaſt numbers of petrified ones found in ſome places, i. 221.

Comets muſt ſometimes fall into the ſun, i. 66. Conſequence of their falling perpendicularly, and of falling obliquely, i. 67. How they may detach a quantity of matter from the ſun, *ib.* Such an event might poſſibly produce other changes in the ſolar ſyſtem, *ib.* n. A comet of no great ſize might detach a 650th part of the ſun's bulk, 68. A comet ſuppoſed by Whiſton to be the cauſe of the deluge, 99. 104. That the earth was at firſt an uninhabitable comet, 101. Its atmoſphere was a chaos of heterogeneous materials, *ib.* Hence the heat

heat of the earth may laſt 6000 years, *ib.* Whiſton's account of the formation of the earth, 103.

Condoma, or ſtriped antilope, deſcribed, vii. 8. Has a head like a ſtag, but horns like thoſe of a goat, 9. Approaches to the ſtrepſiceros of Caius, *ib.* Greatly reſembles the wild goat of the Cape of Good Hope, 11.

Coqualin, vii. 176. n.

Cordeliers, the higheſt mountains in the world, i. 237. Extend from the equator beyond the tropics on both ſides, *ib.* Terminate in vaſt plains watered by the greateſt rivers in the world, 243.

Cornu ignotum, vi. 407. n.

Cornu ammonis, found in vaſt quantities in ſome places, i. 221.

Coudous, or Indian antilope, deſcribed, vii. 40. A very large animal, 41. Perhaps is one of thoſe called *nil-gauts*, 42.

Couguar deſcribed, v. 197. A very ferocious and cruel animal, 198. Is very common in South America, *ib.* Is afraid of fire, 199. The fleſh is good food, *ib.* Couguar of Penſylvania deſcribed, 200. Black couguar deſcribed, 201. This laſt ſpecies ſometimes called the black tiger or cat, 202. Mr. Pennant's deſcription of that animal, *ib.* n. Is the ſame with the animal called *jaguarette*, 203. M. de la Borde's deſcription of the animal, *ib.* Becomes perfectly tame and peaceable in a domeſtic ſtate, 205. Account of a tame one, called the *paltroon tiger*, *ib.*

Couti, v. 58. n.

Cow. See *Ox*.

Cow of Tartary deſcribed, viii. 225. Differs from all the ſpecies of buffaloes, *ib.* The difference conſiſts only in their grunting, inſtead of lowing, 227.

Crab-eater deſcribed, viii. 279. At a diſtance reſembles a terrier, 280. Is very common at Cayenne, 281. M. de la Borde's deſcription of it, 282.

Cryſtal, a new and ſpurious production, i. 199.

Cuandu, v. 119. n. vii. 77. n. 79. n.

Cuguacu, v. 118. n. 138. n. 197. n. 198. n.

Cuniculus, iv. 155. n. 296. n. v. 58. n. 392. n. vii. 202. n. 317. n. viii. 228. n. 230. n.

Currents; a diſſertation on them, i. 351. Of their origin, 259. Ought to be regarded as large rivers, and ſubject to the ſame laws

laws with the land rivers, 361. Account of the moſt remarkable currents in the world, 362. In mountainous places of the ſea, the currents are neceſſarily violent, 364. Hence they are very rapid and dangerous in the Indian ocean, *ib.* Are produced by the coaſts repelling the water of the ſea to different diſtances, 365. The currents of the ocean have ſcooped out our valleys, and formed our mountains, *ib.*

D

Dalenpatius pretends to have diſcovered ſeveral kinds of animals in the ſemen, ii. 131.

Dama, iv. 113. n.

Daſypus, v. 366. n.

Dead ſea; account of the water it receives by rivers, and of what it loſes by evaporation, i. 271.

Death; its natural cauſe common to animals and vegetables, ii. 478. Cannot be avoided, 479. We ought not to be afraid of it, 487. Is not attended with much pain, *ib.* The terror of death is greateſt at a diſtance, 488. Death may be occaſioned by continued pain, 491. Account of the death of Charles XII. *ib.* Many of the female ſex die through the terror of death, 492. The author's doctrine confirmed by the uncertainty of the ſigns of death, 493. A certain condition of life has a great reſemblance to death, 494. We ought not, therefore, to be haſty in burying perſons ſuppoſed to be dead, *ib.*

Deer; that ſpecies of animals deſcribed, iv. 74. n.

Deluge could not have tranſported from the ocean all the ſhells which are found on dry land, i. 14. Nor could it have diſſolved the ſubſtance of the earth, 15. According to Whiſton, the deluge happened on Wedneſday 28th November, 104. Suppoſed to be occaſioned by the tail of a comet, *ib.* And by the waters of the abyſs, 105. How, on this ſuppoſition, the waters of the deluge were diſpoſed of, 106. Burnet's hypotheſis concerning it, 111. Woodward's hypotheſis of an univerſal diſſolution by the water, 113. The face of the earth before the deluge much the ſame as now, 118. Woodward's hypotheſis inſufficient, 120. And likewiſe Whiſton's,

121. Bourguet's theory, 123. Scheutzer's opinion, 126. The face of the earth could not be changed by the deluge, 129. Ought only to be conſidered as a ſupernatural mode of puniſhing human wickedneſs, 130. Could not poſſibly be the effect of any phyſical cauſe, 132. The earth, or at leaſt ſome parts of it, muſt have been in a different ſituation before the deluge, from what it is now, 193. Examples of different deluges, 507.

Delos aroſe from the bottom of the ſea, i. 442. Why called Pelagia, 443.

Des Cartes, the firſt who explained natural appearances on the principles of mechaniſm, ii. 47. How he attempted to explain the formation of the fœtus on theſe principles, 81.

Devil's hole; a cavern in Derbyſhire, deſcribed, i. 451.

Didelphis, v. 407. n.

Dog deſcribed, iv. 1. In a wild ſtate is formidable to all animals, 2. Importance of this ſpecies in the ſyſtem of nature, 4. Wild dogs differ from wolves only by the facility with which they are tamed, 7. Vaſt numbers of wild dogs in America, 8. Great varieties among dogs, 9. Shepherd's dog approaches nearer to the primitive race than any other, 16. The largeſt dogs found in thoſe countries which produce the moſt beautiful of the human race, 18. Iriſh grey-hound called by the ancients the dog of Epirus or Albania, *ib.* Pliny's deſcription of a battle between one of theſe dogs, firſt with a lion and then with an elephant, *ib.* Dogs degenerate in hot climates, 23. Their fleſh preferred by the negroes to that of all other animals, *ib.* An unſucceſsful experiment made by Buffon to make a dog copulate with a ſhe wolf, 24. Another unſucceſsful attempt to make a fox copulate with a bitch, 26. A ſucceſsful experiment of making a wolf copulate with a bitch, 27. n. Another of the ſame kind, viii. 7. Thirty varieties of dogs enumerated, iv. 30. Dogs not perfectly formed at birth, 33. Genealogical table of dogs explained, 37. Account of a bitch who ſuckled puppies and cats, without having any connection with a male, 42. Siberian dogs of different kinds deſcribed, 43. Mr. Colinſon's deſcription of thoſe which draw carriages in Siberia, 45. Of the wild dogs, 47. The fox deſcribed under the name of dog, 214. n.

Domeſtic animals. See *Animals*.

Dorcas, iv. 120. n.

Dordrecht; a terrible inundation there in 1456, i. 442. The city ſeparated from the main land by a ſimilar inundation in 1421, p. 493.

Dormouſe, or ſleeper, iv. 334. Specimens of theſe animals not eaſily procured, *ib.* Two ſpecies of them found in Italy, 335. Sleeps during the winter, *ib.*

Douc, or Cochin-China monkey, deſcribed, viii. 168.

Drake's account of the acridophagi, or locuſt eaters of Æthiopia, iii. 135.

Dreams brought as a proof of the memory of brutes, iii. 256. Are produced independent of the mind, 257. In dreaming we have ſenſations, but no ideas, 258. They never occur during profound ſleep, 259. Difference between our dreams and thoſe of brutes, 261.

Drill, viii. 77. n.

Dromedary deſcribed, vi. 118. Their great ſwiftneſs, 129. n. 130. n. Whence the bunches on the backs of theſe animals, and of the camel, proceed, 137. Dromedaries produced at Dreſden, 149.

Dugon, or Indian walrus, deſcribed, vii. 70. Is diſtinct from the ſea-lion, 371.; called by ſome the ſea-bear, or the ſea-cow, 371, 372.

Dumb people have no abſtract and general knowledge, iii. 36. Account of one who ſuddenly began to ſpeak, *ib.* Dumb perſons taught to ſpeak by Pereire, 38.; and by Mr. Braidwood of Edinburgh, 39. n.

E

Earth, ſuppoſed by Whiſton to have undergone various changes from the tail of a comet, i. 2. Burnet's imaginations concerning it, 3. Principal appearances of the globe explained by Woodward from the action of an internal abyſs, *ib.* General deſcription of the earth, 4. Shows itſelf to be only the ruins of a world. Our knowledge of it only ſuperficial, 6. Matter of which it is compoſed four times heavier than that of the ſun, *ib.* Its upper ſtratum compoſed of decayed animals and vegetables, 12. Its ſtrata always parallel to each other,

other, *ib.* 15. Great changes muſt have taken place on the ſurface of the earth in thoſe ages immediately ſucceeding the creation, 13. It muſt have acquired a conſiderable degree of ſolidity before the deluge, 15. Could not have been diſſolved by the deluge, *ib* 16. Horizontal poſition of its ſtrata, owing to the operation of waters, 15. 18. 28. Why the ſtrata in mountains are inclined to the horizon, 15. Figure of the earth not perfectly ſpherical, owing to its diurnal revolution, 17. How a true theory of the earth is to be eſtabliſhed, 34. Enumeration of its principal phænomena as a planet, 59. Of its figure, and the materials of which it is compoſed, 84. Whether its parts are homogeneous, 87. Whiſton's theory of the earth, 97—108. His hypotheſis erroneous, but ingenious, 99. Fertility of the earth before the deluge, occaſioned by a central fire, 103. Figure of the earth changed from a perfect ſphere, 106. Remarks on Whiſton's theory, 107. Burnet's theory defective, 109. Woodward's theory, 113—117. Futility of his ſyſtem pointed out, 114. Examination of various theories and their abſurdities, 118—132. Bourguet's account of the earth before and after the deluge, and how it is again to be deſtroyed, 123. Leibnitz's theory different from all others, 124. The earth was formerly a fixed and luminous ſtar, *ib.* Diviſion of the globe into two belts of land and two of water, 133. Ancient continent the principal belt, *ib.* Number of ſquare leagues it contains, 135. New continent the other belt, 135. What parts of the earth are to be reckoned the moſt ancient, 136. Remarks on the diviſion of the earth, 138. Firſt diſcoveries of the New Continent, 140. Ignorance of the ancients concerning the extent of the earth, 141. A much greater ſpace occupied by ſea than land, 142. Diſcoveries by different circumnavigators, 143. Formation of the different ſtrata of the earth, 157—187. Figure aſſumed by the earth when in a melted ſtate, 158. Interior parts compoſed of vitrified matter, 159. Formerly the earth muſt have been covered with water, *ib.* Changes on its ſurface, with the reaſons of them, 160. Table of the different beds of earth found at different depths, in certain places, 163. The upper ſtratum compoſed of decayed vegetable and animal matter, 167. Arrangement of the ſtrata, 170. Fiſhes, the firſt inhabitants of the globe, 174. The ſtrata of the earth not arranged according to their ſpecific gravities,

gravities, 179. Probable conjecture concerning the formation of the globe, 181. Sand and clay, the ſcoriæ of burnt matter, 187. Obſervations of different authors on the various changes which have taken place on the ſurface of the earth, 223. Of the inequalities on the earth's ſurface, 228—250. Theſe inequalities neceſſary to life and vegetation, 228. Phyſical neceſſity for its irregularity, 229. Proofs of the author's theory, 243. Of the materials of the earth, and how they are arranged, 244. Surface of the earth moſt unequal in countries thinly inhabited, 282. The author's theory firſt ſuggeſted, from obſerving the correſpondence between the angles of oppoſite mountains, 366. Summary of the doctrine concerning the earth, 512.

Earthquakes; diſſertation upon them, i. 408.; are produced by volcanoes, 417. Accounts of ſeveral terrible earthquakes, 418. Gentile's remarks on earthquakes, 427. Whether earthquakes are capable of raiſing mountains, 427. See *Mountain*. Earthquakes of two kinds deſcribed, 432.; cauſes of thoſe which extend their effects over wide regions, 434.

Echinus, iv. 300. n.

Ecureuil d'Amerique, v. 326. n.

—— Suiſſe, v. 329. n.

—— Volant, v. 307. n.

Eggs; experiments upon them by Fabricius ab Aquapendente, ii. 86.; how they are diſpoſed within the body of a hen, *ib.* Harvey's ſyſtem of generation by means of eggs, ii. 89. See *Generation*. Eggs conſtitute the firſt claſs of organic beings, 219.; are only inſtruments for ſupplying the place of uteri in thoſe animals deprived of this organ, 242. The term *egg* applied by anatomiſts to things of a very oppoſite nature, 243.

Elephant, the moſt reſpectable animal in the world except man, vi. 1. Is able to kill a lion with his tuſks, 6. His immenſe ſtrength, *ib.*; hath been exceedingly eſteemed in all ages, 7. Account of the famous white elephant in India, ſaid to be 300 years old, 8. n. Elephants in a wild ſtate are not ſanguinary, 10. The hunters dare only attack the ſtraggling ones, 11. Theſe animals are extremely ſuſpicious, and ſenſible of injuries, 12. Their ſenſe of ſmelling is exceedingly acute, *ib.* They are excellent ſwimmers, 13. An enraged elephant can be ſtopped only by fire, 14. n. Account of their

manner of generating, 15. Never generate in a domeſtic ſtate, 16.; method of hunting and taming them, 18. A tame elephant is the moſt gentle and obedient of all domeſtic animals, v. 25. Inſtance of his great ſtrength and ſagacity, 26. n. 40.—43. Method of conducting an elephant, 27. Extreme affection of the elephant for its guide, *ib.* The ſpecies extremely numerous, and why, 28. Never change their climate, 29. Why elephants are no longer uſeful in war, 30. Manner of uſing them in war in the Eaſt, 32. The African elephants cannot be tamed without difficulty, 33. No wild elephants now found on this ſide of Mount Atlas, 34. Mr. Adanſon's account of the elephants at Senegal, 34. n. Are more numerous in Africa than in Aſia, 37.; overturn the houſes of the negroes, *ib.* n. Have a contempt for all other animals, *ib.* The largeſt elephants found in the ſouth of India and the eaſt of Africa, 38. The Aſiatic elephants in general larger than the African ones, *ib.* Thoſe of Ceylon excel all others, *ib.* n. Price of elephants and manner of feeding them, 41. n. Of their extreme longevity, 42. Elephants of a white or red colour highly valued, 43. The properties of the elephant particularly conſidered, 47. Inconveniences to which the elephant is ſubject from the figure of his body, 54. Water is as neceſſary to the elephant as air, 63. Many of the Indians devoutly regard the elephant's tail, 65. n. The growth of the elephant retarded by his being kept in a domeſtic ſtate, 67. He loves wine, arrack, the ſmoke of tobacco, but hates bad ſmells, and will fly at the ſight of a hog, 71. Some remarkable accounts of the properties of the elephant by the Marquis de Montmirail and others, 72—81. The prodigious tuſks and bones attributed to the *mammouth*, belonged in reality to the elephant, 82. Some account of the vaſt ſize of overgrown elephants, and the bones of the mammouth found in Siberia, 82—88. Miſtake corrected with regard to the manner of their copulation, 90.

Elk deſcribed, vi. 315. Unknown to the Greeks, 317.; and to the Latins before the time of Julius Cæſar, *ib.* Exiſted formerly in the foreſts of Gaul and Germany, 322. Is found in lower latitudes in America than in Europe, 324. American elks deſcribed, 327. n. Compariſon of the elk with the ſtag, 328. How the elk is killed by the glutton, 340. Deſcription of the elk in the memoirs of the Academy, 344.

Particular

Particular deſcription of the elk, and the manner of hunting him, 347—350. Is ſubject to the falling ſickneſs, 348. n. Account of an elk kept by the Duke of Richmond, 351.
Elk of Africa deſcribed, vii. 3. n.
Empacaſſa, an animal reſembling the buffalo, deſcribed, vii. 43. n.
Equus, iii. 306. n. 399. n. vi. 264. n.
Erinaceus, iv. 300. n. vii. 86. n.
Ermine deſcribed, iv. 262. Becomes white in winter, 263. Has always a ſlight tinge of yellow in the temperate climates, *ib.* Pontoppidan's remarks on this animal, 264.
Ethiopian boar. See *Cape Verd Boar.*
Ethiopians deſcribed, iii. 134.
Eunuchs, their properties, ii. 407. Of the different modes of caſtration, 404.
Euriceros, iv. 113. n.
Exquima, a kind of monkey deſcribed, viii. 184. Perhaps only a variety of the coaita, 185. The ſame with the animal called *Diana* by Linnæus, 188. Differences between the exquima and coaita, 191.
Eyes of the human ſpecies ſtrongly expreſs the paſſions, ii. 438. Of the different colours of the eyes, 439.
Eye-brows and eye-lids, their uſe, ii. 441.

F

Fallow-deer deſcribed, iv. 113. Approaches nearly to the ſtag, *ib.* The fleſh of this animal preferred by dogs to all others, 114. Difference between the fallow-deer and the ſtags, 114—118.
Faras, or ravale, v. 406. n.
Fecundity of different animals, table of it, viii. 26.
Felis, iv. 49. n. v. 64. n. 153. n. 168. n. 197. n. 206. n. 240. n. vii. 249. n.
Ferret deſcribed, iv. 252, A different ſpecies from the polecat, *ib.* Female ferrets die if their deſires for a male are not gratified, 253. Exceſſive ſleepy animals, *ib.* A natural enemy to the rabbit, *ib.*; how employed to hunt the rabbits, 254. Brought from Africa to Spain, according to Strabo, *ib.*; uncertain

uncertain whether it is the *ictis* of the Greeks, 255.; pretty ſtrong proof againſt their identity, *ib.*

Fial-mus, vii. 316. n.

Fial-rache, vii. 258. n.

Field-mouſe, iv. 42. 85. 293.

—— Long-tailed deſcribed, iv. 285. Very generally and copiouſly diffuſed, eſpecially through elevated countries, *ib.* A ſingle animal will ſometimes amaſs a whole buſhel of acorns, nuts, &c. 287. Is an exceedingly prolific animal, 289. They devour one another, *ib.*

—— Short-tailed field-mouſe more generally diffuſed than the former, iv. 293.; does great damage by cutting the ſtalks of corn, *ib.*; reſembles the water-rat in its internal ſtructure more than any other animal, 294.

Fiſhtal, vi. 206. n.

Fiſſures of the earth neceſſarily aſſume a perpendicular direction, and why, i. 42. Their ſides correſpond as exactly as thoſe of a ſplit piece of wood, 43. 270.; vary greatly in their extent, *ib.* 470. Cauſe of the large fiſſures, *ib.* Diſſertation on perpendicular fiſſures, 442.; their origin hitherto unexplained, 458.; are often filled with concretions, ſometimes regular and tranſparent, and ſometimes earthy and opaque, 463.; are found in flint rocks as well as in ſtone, 469.

Fœtus; diſcourſe on its formation, ii. 271. Is either male or female, according as the organic particles prevail in the male or female ſemen, 274. Why a fœtus cannot be produced in the body of the male, 278. Placenta and membranes produced at the ſame time with the fœtus, 279. Why two fœtuſes are not produced inſtead of one fœtus with the placenta, &c. 80. Sexual parts of the male fœtus derived ſolely from the father, and the reſt of the body from the mother, and *vice verſa*, 283. The fœtus is formed by a mixture of the organic particles of both ſexes, 286. Attempt to explain its formation, 287. The whole fœtus formed at the ſame time, 289. The whole perhaps formed in a moment, 294. How fœtuſes may be formed in the vagina, *ib.* Inſtances of their being found in the ovaria, Fallopian tubes, &c. 295.; of their being formed in the teſticles of men, 296.; how this may happen, and how virgins may produce moles, 297, 298. Of the expanſion, growth, and delivery of the fœtus, 302. Two kinds of growth diſtinguiſhable in the fœtus, *ib.* How the

the fundamental and eſſential parts of an animal body may be diſcovered, 304. The double parts of the body produced on each ſide of the ſingle parts by a ſpecies of vegetation, 305. The ſpinal marrow and vertebræ appear to be the real axis of all the double parts of the body, and the ſource from whence they proceed, *ib.* Proofs that the double parts proceed from the ſingle ones, 306. An attempt to explain the manner in which the fœtus is expanded, 309. Size of the fœtus at different periods of pregnancy, 314—318. Why labour pains at laſt come on, 319. The moſt natural birth is when the fœtus eſcapes without burſting the membranes, 321. Explanation of the uſes of the umbilical chord, membranes, &c. to the fœtus, 322. Of the exiſtence of the *allantois* in the human ſpecies, 324. Whether the child may reſpire before its birth, 325. Of the circulation of the blood before birth, 326. Of the nouriſhment of the fœtus, 328. The imagination of the mother cannot affect the fœtus, 332. Of the times of geſtation, 334. Various opinions concerning the cauſes of delivery, 336. The author's reaſons for ſuppoſing that it is occaſioned by the menſtrual blood, 339. Why delivery is always followed by an hæmorrhage in the human ſpecies, 344. No hæmorrhage attends the delivery of cows, ſheep, and other animals, 344.

Foſſa, vii. 219. n.

Foſſane deſcribed, vii. 219. Why called the genet of Madagaſcar, *ib.* The genitals of the male have an odour of muſk, *ib.* Is very difficult to tame, 220. Is the ſame with the animal called *berb* in Guiney, *ib.*

Foſſil ſhells; diſſertation upon them, i. 188. Prodigious quantities of them found in ſome places, *ib.* An ignorant porter in the 16th century, firſt aſſerted that they were really ſhells, in oppoſition to the learned, 189. An aſtoniſhing maſs of ſhells diſcovered by Reaumur, 190. Mr. Reaumur's obſervations concerning them, 191, 192. The above-mentioned maſs could not be the effect of the deluge, 193. How ſuch prodigious quantities might be collected, 194. Shells are the medium employed by nature in the formation of moſt kinds of ſtones, 195. Are never found in common rocks, granite, or free-ſtones, 199. Are found on the tops of the higheſt mountains, 200. Strange opinions of Leibnitz and an Italian author concerning them, 203. Are to be met with in almoſt all

all countries, 205—214. Woodward's opinion concerning their poſition, 217. His aſſertions not univerſally true, 218. Whole mountains, rocks, and extenſive quarries often full of them, 221.

Fox deſcribed, iv. 214. The method of hunting him, 216. How he gets the better of wild bees, waſps, and hornets, 218. Will not copulate with bitches, 221. Of the foxes of different countries, 224.

Foyna, iv. 239. n.

Furo, iv. 252. n.

Furunculus, iv. 252. n.

Furor uterinus, a ſpecies of madneſs, ii. 423. Sometimes proves fatal, 424.

G

Gainus, iv. 239. n.

Galeopithecus, viii. 205. n.

Galera, or Guiney weaſel deſcribed, viii. 265. A ſmall ſpecies of martin or polecat, 266.; has a ſtrong odour of muſk, *ib.* n.

Generation of animals; a diſſertation upon it, ii. 49. Attempt to ſolve it by the hypotheſis of organic matter, 50. Proof of the hypotheſis drawn from the reſemblance of children to their parents, 59. Examination of different ſyſtems, 64. Plato's ſyſtem, *ib.* Final cauſes not to be admitted in reaſoning on this ſubject, 69. Ariſtotle's ſyſtem conſidered, 71. Opinions of Hippocrates, 81. His ſyſtem preferable to that of Ariſtotle, 85. Aquapendente's obſervations on eggs, 86. Gives no clear idea of generation, 88. Harvey's ſyſtem, *ib.* His obſervations concerning the growth of the chick, 91—94. Concerning the growth of the fœtus in deer, 94—96. Suppoſes all animals to proceed from eggs, and that generation is a work of the uterus alone, 96, 97. His ſyſtem uncertain and obſcure, 98. Obſervations of Malphigius on eggs, 101—105. Harvey cenſured for want of accuracy, 105. His experiments compared with thoſe of De Graaf on rabbits, 107—113. De Graaf and Malphigius better obſervers than Harvey, 113. No eggs exiſt in the teſticles of females, 115. Malphigius and Valiſnieri the moſt exact writers on generation, 116. Account of their obſerva-

obſervations and experiments, 116—126. Lewenhoeck's ſyſtem of generation by animalcules, 127—137. Both the ovicular and animalcular ſyſtem attended with inſuperable objections, 138—146. A celebrated experiment by Nuck in favour of eggs, 146. Inconcluſive, 147. Experiments of the author, ſhewing that the ſmall moving bodies obſerved in the ſeminal fluids are not animalcules, 150—192. Compariſon of theſe with the experiments of Lewenhoeck, 193—211. Reflections on theſe experiments, with a full explanation of the author's ſyſtem, 212—254. Of the varieties in the generation of animals, 255—270.

Genet deſcribed; v. 254. Is more eaſily tamed than the martin, 255. Requires a warm climate for its ſubſiſtence and multiplication, *ib.* A particular kind of genet deſcribed, 257.

Genetta, v. 254. n.

Geography; a diſſertation upon it, i. 133—156.

Gerboiſe; vii. 202. n.

Gerbua; *ib.*

Germ; immenſe quantity of matter produced by a ſingle one, ii. 35.

Gibbon, or long armed ape, deſcribed, viii. 113. Etymology of the word *gibbon*, *ib.* Is of a tranquil diſpoſition and gentle manners, 114. Called the *feſé* in the kingdom of Gannaura, on the frontier of China, 115. n. Derivation of the word *feſé*, *ib.*

Gibraltar; no double current runs through the ſtraits, as has been aſſerted, i. 313.

Giraffe; ſee *Camelopard.*

Glis; iv. 235—239. vii. 198.

Glouton; vii. 274. n.

Glutton deſcribed, vii. 274. Firſt taken notice of by Olaus Magnus, 275. His incredible voracity, 277—280. n. Account of one kept alive in France, 282. Deſcription of a voracious American animal called *carcajou*, 285. A ſimilar animal deſcribed, 289.

Goat deſcribed, iii. 486. Is ſuperior to the ſheep, 491. Is naturally a friend to man, 493. Does not thrive well in plain countries, 395.

— Wild goat, chamois goat, &c. deſcribed, vi. 363. Both theſe were unknown to the Greeks, *ib.* Are to be conſidered as one ſpecies with the domeſtic goat, 377. All the ten ſpecies of goats,

goats, mentioned by different authors, ought to be reduced to one, 380. Goats are ſubject to the vertigo, 382. The wild and chamois goats only found in deſerts, and on the higheſt and moſt rugged mountains, 383. Hunting the wild goat is very laborious, and ſometimes dangerous, 385.

Grimm, or Guiney antilope, deſcribed, vii. 14. Has a yellow humour ſecreted in its eyes, ſmelling like a mixture of muſk and caſtoreum, 18.

Griſon, or gray weaſel deſcribed, iv. 266. Doth not belong to the weaſel tribe, 267.

Guariba, viii. 176. n.

Guib, or harneſſed antilope, deſcribed, vii. 12.

Guiney-pig deſcribed, iv. 296. Is an exceſſively ſalacious and prolific animal, 297.

Gulo wielfraſs, vii. 274. n.

H

Hamſter, or German marmot, deſcribed, vii. 178. Is the moſt deſtructive of all the rats, *ib.* The hamſters deſtroyed by the pole-cats, 185. They likewiſe devour each other, *ib.* Become torpid in winter, and cannot be awakened even by an electrical ſhock, 187. Particular account of the appearance of the hamſter, when torpid, and in what manner he awakes, 193—196. Seems to have no other paſſion but that of rage, 196. Even the male and female hamſters devour each other, 197. Is not a marmot, 198.

Hare deſcribed, iv. 137. Multiplies very faſt, 143. Does not chew the cud, 145. Has an acute ſenſe of hearing, but his ſight is bad, 146. Surpriſing inſtances of inſtinct in the hare to preſerve itſelf from danger, 147. Meaſled hares love marſhy and watery grounds, 149. Mountain hares larger and better than thoſe of the plains, 149. Become white in high mountains, and in northern regions, during winter, 149. Hares are equally diffuſed over all climates, 150. Their fleſh is not reliſhed by the Eaſtern nations, 151. Manner of hunting them, 152. Hares often make holes in the clefts of rocks, 153. Will ſometimes catch mice like cats, according to Pontoppidan, *ib.*

Haut, vii. 151. n. 158. n.
Hearing, a diſcourſe on that ſenſe, iii. 26. Is liable to deceptions in ſome inſtances, *ib.* Curious inſtance of a deception with regard to the ſound of a bell, 27. Of the different tones of ſound, 28. Why ſome ſounds are more agreeable than others, 31. Of the reflection of ſounds, and the organs of hearing, 33. Of deafneſs, 34. Thoſe who have bad ears, and unmuſical voices, hear better with one ear than the other, 34. Of trumpets and funnels for aſſiſting the hearing, 35.
Hedge-hog deſcribed, iv. 300. The female devours her offspring when confined, 302. Is a malevolent animal, *ib.* Very generally diffuſed, 303.
Herinaceus, iv. 300. n. 304. n.
Hiam, vii. 44.
Hippopotamus deſcribed, vi. 277. Imperfectly known to the ancients, 278. No preciſe information obtained concerning him till the middle of the 16th century, 279. His ſkin is impenetrable, unleſs ſteeped in water, 281. Columna's deſcription of this animal inferior to Zerenghi's, 285. Prodigious ſtrength of the hippopotamus, 293. The ſpecies is not numerous, 295. Sometimes confounded with the ſea-cow, 297. The hippopotamus mentioned by Diodorus Siculus, 304. Obſervations on the method of preparing the animal's ſkin, 305. His blood employed by the Indian painters as one of their colours, 314.
Hircus, vi. 206. n. vii. 33. n.
Hog, hog of Siam, and wild boar, deſcribed, iii. 500. Is not a diſtinct ſpecies from the wild boar, 501. Is approached by no other ſpecies of animals, *ib.* The fat of the hog differs from that of almoſt every other animal, 509. The hog is the moſt rude and brutal of all quadrupeds, 511. His ſenſe of feeling is very imperfect, inſomuch that mice will ſometimes eat into his back without diſturbing him, 512. Is ſubject to a leprous diſeaſe, *ib.* Beſt method of fattening hogs, 513. Wild boars never attack or devour other animals, 518. Method of hunting them, 520. Hogs have multiplied greatly in America, 521 The boar, by becoming domeſtic, degenerates in cold countries, 522.
Mexican hog deſcribed, v. 271. Is the moſt numerous and remarkable of all the animals in the New World, *ib.* Goes by a great variety of names, *ib.* n. Has a remarkable aperture on

on his crupper, 272. Might eaſily be rendered domeſtic, 273. Never intermixes with the European hogs, 275. Two diſtinct ſpecies of theſe animals mentioned by M. de la Borde, 276. His deſcription of them, 277.

Hog, Guiney-hog deſcribed, viii. 239. Is domeſtic and perfectly tame, 240.

—— ſtag deſcribed, iv. 111.

Hoitzlacuatzin, vii. 76. n.

Homo duplex; or a diſſertation upon the internal qualities of man, iii. 264.

Homo ſylveſtris, viii. 77. n.

Hooded ſerpent; a ſtone found in its head, vi. 440.

Horſe deſcribed, iii. 306. His excellent character, *ib.* Is rarely ſeen in a natural ſtate, 307. Is not ferocious, even when wild, 308. Accounts of them by different authors, 309. Directions for weaning foals, 314, 315. When the colts ought to be dreſſed, 316. The horſe's mouth endowed with great ſenſibility, 318. Explanation of the technical terms employed to expreſs the different external parts of a horſe, 203. n. Of the properties which diſtinguiſh a good horſe, 320—335. Of the propagation of horſes, 335—344. Of croſſing the breeds of horſes, 346. Of different kinds of horſes, 357. Remarkable inſtance of the ſwiftneſs of an Engliſh race-horſe, 361. Of the feeding of horſes in different countries, 385. Horſes often removed from the dominion of their maſters form the link between domeſtic and wild ones, 394.

Hottentots are not true Negroes, iii. 176. Kolbe's account of their method of extirpating one of the teſticles of their males, *ib.*

Huanuca-Chama, vii. 133. n.

Human ſpecies; varieties of it in the different countries of the world, iii. 57.

Hurricanes; diſſertation on them, i. 386.

Hyæna deſcribed, v. 226. This animal confounded with the jackal, the civet, the glutton, and the baboon, *ib.* He is ſolitary, extremely ferocious, and can never be tamed, 235. Tears the dead bodies of men and animals out of the earth, 236. More abſurdities related of the hyæna than of any other quadruped, *ib.* Account of a hyæna ſhewn at St. Germain, 237. Great ſtrength of the hyæna, 238.

Hymen; whether that membrane exiſts or not, ii. 415.
Hyſtrix, vii. 69. n. 76. n. 83. n.

I

Jackal deſcribed, vii. 255. Varies every where in ſize, 256. Diffuſed all over Aſia, from Armenia to Malabar, 250. The ſame with the *thos* of the ancients, 263. Dig up the bodies of men though buried ever ſo deep, 264. Will eat leather, ſkins, tallow, and even excrements, 265. More troubleſome than the hyæna, *ib.*
Jaguar deſcribed, v. 187. The moſt cruel and formidable animal in America, 188. Is ſaid to attack ſavages rather than Europeans, 189. Account of one ſent to France from New Spain, 193. Manoncour's remarks on the jaguars of Guiana, 194. Is ſometimes killed by the ant-eater, 196.
Jaguara, v. 188. n.
Jaguarete, v. 94. n.
Jarff, vii. 274.
Javelin bat. See *Bat.*
Ibex, vi. 363. n. 394. n.
Ichneumon deſcribed, vii. 210. Is domeſtic in Egypt like the cat in Europe, *ib.* Hunts and eats every living creature, 211. Deſtroys the eggs of the crocodile, and the young crocodiles themſelves, 212. There are no diſtinct ſpecies of ichneumons, 213. Haſſelquiſt's deſcription cenſured, 214. Ichneumon cannot be eaſily reared in temperate climates, 217.
Ignavus, vii. 151. n.
Jerboas deſcribed, vii. 201. Four diſtinct ſpecies of them, *ib.* Cannot walk, but advance by leaping, 207. M. Gmelin's remarks on its internal ſtructure, 207.
Indian walrus. See *Walrus.*
Infancy; diſcourſe on it, ii. 269.
Infibulation; how performed, ii. 403.
Jocko deſcribed, viii. 77. See *Orang outang.*
Iſatis, or arctic dog deſcribed, vii. 268. Is peculiar to the northern regions, 270. Why called the *croſs fox*, 271. Mr. Colinſon's remarks on this animal by the name of *coſſac*, 172.

Iſlands; a diſcourſe on the origin of new ones, i. 442. Are either produced ſuddenly by the operation of ſubterraneous fires, or accumulated by the ſediment of the waters, *ib.* Accounts of the riſing of many new iſlands, 443. *et ſeq.* New iſlands never appear but in the neighbourhood of old ones, 449. Why there are few iſlands in open ſeas, *ib.*

Iſthmus of Suez; would produce a great inundation if cut, i. 39.

K

Kebos, viii. 156. n.

Kevel, or flat-horned antilope, deſcribed, vi. 400.

Krietſch, vii. 178. n.

Kumrah; a creature begot between an aſs and a cow, viii. 35.

L

Lacerta, v. 356. n.

Lacertus, v. 355. n.

Lakes, a diſſertation on them, i. 290. Wherein they differ from mediterranean ſeas, 322. Different kinds of lakes deſcribed, 330, 331. How ſalt lakes may be produced, *ib.* Enumeration of ſome of the moſt remarkable lakes, 333. Account of a lake in Bohemia, from whence often iſſue violent winds, 338.

Lama deſcribed, vii. 133. No exact hiſtory of this animal hitherto given, 135. This animal mentioned by Geſner under the name of *allocamelus*, 136; and by Matthiolus under that of *elaphocamelus*, *ib.* Peru is their native country, 138. Are extremely laſcivious, yet copulate with difficulty, 141. Cannot be made to quicken their pace, *ib.* n. When wild, they will climb the higheſt rocks, 143.

Lamantin, vii. 375. n.

Land; a general view of it, i. 10. Was formerly covered with the ocean, 12—17. In what manner it emerged from under the ocean, 30. Reaſons for ſuppoſing the dry land and the ocean to change places with each other, 41. 32. Inſtances

of theſe changes, 40. Diſſertation on the changes of land into ſea, 483.
Leem, vii. 316. n.
Leming, or Lapland marmot, deſcribed, vii. 316. Inhabit the mountains of Norway and Lapland, 318. Sometimes appear in ſuch numbers as to cover the whole ſurface of the earth, *ib.* n. Are thought by the vulgar to fall from the clouds, 319.
Lemmar, vii. 316. n.
Lemur, vii. 223—231.
Leo, v. 64. vii. 348.
Leopard deſcribed, v. 169. Was unknown to the ancients, *ib.* Is called *engoi* at Congo, and *antamba* at Madagaſcar, 184. See *Ounce* and *Panther*.
Lepus, iv. 137. n. 155. n. viii. 228. n. 276. n.
Lepuſculus, iv. 155. n.
Lidmee, or brown antilope, deſcribed, vi. 413. n.
Life; table of the duration of it, ii. 498.
Lion deſcribed, v. 65. The ſpecies very numerous and fierce in the ſouthern regions of Africa, 68. The lion is capable of being tamed, 69. His generous temper, 70. The American lion has no mane, 74. Lions may be kept alive, and even propagate, in temperate countries, 77. Ariſtotle's miſtakes concerning the lion, 79. The ſenſes of ſmelling and ſight leſs acute in the lion than in other animals, 81. His manner of hunting his prey, 82. Is fond of the fleſh of camels and young elephants, 85. How hunted, *ib.*
Loris, or tail-leſs maucauco, deſcribed, vii. 231. Differs from all other quadrupeds in the number of its vertebræ, *ib.* Thevenot's deſcription of it, 233.
Loutre, vii. 231.
Lowando deſcribed, viii. 133.
Lupus, iv. 196. n. v. 206—226. vii. 255.
Lutra, iv. 233. n. 236. n. vii. 321. n.
Lynx deſcribed, v. 206. The fineſt ſkins of lynxes come from Siberia and Canada, 209. Miſtake of Mr. Klein concerning it, 208—210. The lynx prefers cold to temperate countries, 213. Fables of the ancients concerning this animal, 215. Deſcription of a Canadian lynx, 217. Norwegian lynx deſcribed, 218.

M

Macaque and egret deſcribed, viii. 140. Are mild and tractable animals, but extremely dirty and diſagreeable, 241.
Maucauco. See *Maki*.
Madagaſcar; account of the inhabitants of that iſland, iii. 160.
Magot, or Barbary ape, deſcribed, viii. 117.
Maimon, or pig-tailed baboon, deſcribed, viii. 137.
Makis, or maucaucos, deſcribed, vii. 223. Seem to be confined to Madagaſcar, Moſambique, and the lands adjacent to theſe iſlands, 229. Conſtitute the ſhade between the long-tailed monkeys and digitated quadrupeds, 230.
Malbrook and Chineſe bonet deſcribed, vii. 148. Approach very near to the macaque, *ib.*
Man; his natural hiſtory, ii. 353. Is better acquainted with other objects than himſelf, *ib.* Ought firſt to acquire diſtinct ideas of the two ſubſtances of which he is compoſed, 354. All our knowledge derived from compariſon, 355. Exiſtence of the ſoul ſelf-evident, *ib.* We are leſs certain of the exiſtence of external than of internal objects, 357. Compariſon of the mind with the body, 358. Of man with other animals, 361. Proofs of the immateriality of the human ſoul, 361—367.
Man of the wood, viii. 375.
Manati deſcribed, vii. 374. Firſt deſcribed by Oviedo, 376. Another deſcription, 382. M. de la Condamine's deſcription more perfect than any other, 385. This animal found on the coaſts and rivers of Africa as well as in America, 387.
Manatus, vii. 375. n.
Mandrill, or ribbed-noſe baboon deſcribed, viii. 129. Has a violent paſſion for women, 131.
Mangabey, or monkey with white eye-lids, deſcribed, viii. 154.
Manhood; diſcourſe on that ſtate of the human body, ii. 436.
Manicou, v. 406. n.
Manis, or ſcaly lizard, deſcribed, v. 355. Two ſpecies of it, the long and ſhort tailed, *ib.* Seem to conſtitute the laſt ſhade between quadrupeds and inſects, 360. How they defend themſelves againſt beaſts of prey, *ib.* n.
Manitou, v. 406. n.

Margay, or Cayenne cat, deſcribed, vii. 249. Is a ferocious and cruel animal, 250. The ſame with the *pichou* of Louiſiana, *ib.* The guepard likewiſe belongs to this genus, 251. and the tiger wolf, *ib.* Deſcriptions of tiger-cats by M. de la Borde and M. Condamine, 252, 253.

Marikina, or ſilky monkey, deſcribed, viii. 209.

Mormoſe, or marmoſa, v. 245. n.

Marmot deſcribed, iv. 339. Is eaſily tamed when taken young, 340. Has ſome reſemblance both to the bear and to the rat, 341. Is very ſubject to be rendered torpid by cold, 342. Some of theſe animals are ſaid to allow themſelves to be loaded with hay, and drawn by others like a cart, 343. Become extremely lean towards the end of the ſleeping ſeaſon, 344. The Greeks were unacquainted with this animal, and Pliny is the firſt Latin author who takes notice of it, 345. Marmot of Canada deſcribed, 346. Marmot of Kamtſchatka, and of the Cape of Good Hope, deſcribed, 348. The latter ſometimes known by the name of the *rock badger*, 349. Other marmots deſcribed, vii. 198.

Marriage. See *Puberty*.

Marta, iv. 245. n.

Martarus, iv. 245. n.

Martes, iv. 229. n. 245. n. vii. 309. n.

Martin deſcribed, iv. 239. Cannot be perfectly tamed, 241. Sometimes ſleeps two days ſucceſſively, and at other times ſleeps none for as long, 242.

Martin of Guiana deſcribed, 243.

Marſhes; of their effects, i. 473. Account of the moſt remarkable marſhes in Europe, 478.

Mazames deſcribed, vii. 30. The word, in the Mexican language, is a generic name for the ſtag, the fallow-deer, and the roe-buck.

Meles, iv. 226. n. v. 239. n. vii. 210. n.

Memina deſcribed, vii. 28. n.

Merian opoſſum deſcribed, viii. 267. Merian's miſtake with regard to it, 269.

Mico, or fair monkey, deſcribed, viii. 214. Never deſcribed by any traveller but M. Condamine, 215.

Modena; peculiarity of the ſoil in that dutchy, i. 481.

Mole deſcribed, iv. 309. Is more amply endowed with generative organs than any other animal, 310. Is moſt annoyed

by the inundations of rivers, 311. Curious method of forming an habitation for its young, 312. Does not ſleep during the winter, 313. Frequents only cultivated countries, 314. Mole of the Cape of Good Hope deſcribed, 315. Pennſylvania mole deſcribed, 316. Raiſes not the earth like the European moles, *ib.* Siberian mole deſcribed, viii. 238.

Mona, or varied monkey deſcribed, viii. 156. Is fond of ants and other inſects, 158.

Monax, or marmot of Canada. See *Marmot.*

Mone, viii. 156. n.

Monghos, vii. 210. n.

Mongooz, vii. 224. n.

Mongous, vii. 224. n.

Moſchus grimmia, vii. 14. n.

Moſchus moſchiferus, vii. 45. n.

Mouffettes, or ſtinking pole-cats, deſcribed, vii. 295. Have been confounded with each other, and with animals of very different ſpecies, 296. Diffuſe a moſt intolerable odour, 299—306.

Mouflon, and other ſheep, deſcribed, vi. 205. Is the primæval ſtock of all the other ſheep, 228. Few now exiſt in Corſica, 229.

Moulds, internal; attempt to define them, and explain generation by them, ii. 33.

Mountains; how formed by the motion of the waters, i. 20—30. Tropical mountains more elevated than thoſe of the temperate climates, 231. Their figures very different, 233. Their tops at a diſtance reſemble the waves of the ſea, 234. The nearer we approach the Equator the higher are the mountains, 237. The contours of all mountains reſemble the works of regular fortifications, 241. Mountains have not been formed by ſubterraneous fires, 429. Nor by earthquakes, 431. Compoſition of their internal parts, 461.

Mouſe deſcribed, iv. 282. May be tamed to a certain degree, *ib.* Prodigious increaſe of theſe animals, 283. Why ſome people have a horror at them, *ib.* White and red mice found in different countries, 284.

Mules; diſſertation on them, viii. 1. Differences between the mules produced by a jack aſs and a mare, and thoſe produced by a horſe and a female aſs, *ib.* Remarks on the mules produced by a he-goat and ewes, 4. On thoſe produced between a dog and wolf, 6. Ariſtotle's remarks on the offſpring of

of a mule with a mare, 15. Proofs of the fecundity of common mules, 15—21.

Mus, iv. 275. n. 285. n. 290. n. 293. n. 296. n. 305. n. 334. n. 339. n.; v. 58. n. 261. n. 392. n. 406. n. 435. n. 438. n.; vii. 202. n. 316. n.; viii. 229. n. 233. n. 235. n. 267. n.

Muſaraneus, iv. 305. n.

Muſſaſcus, v. 260. n.

Muſk deſcribed, vii. 44. This animal firſt taken notice of by the Arabians, 45. Guiney muſk deſcribed, vii. 27.

Muſk rats of Canada and Muſcovy deſcribed, v. 260. Theſe animals ought not to be confounded with each other, or with the muſk-rat of the Antilles, 261. M. Sarraſin's obſervations on the Canadian muſk-rat, 263. Differences between this animal and the beaver, 267. Their odour, though agreeable to the Europeans, is extremely diſguſtful to ſavages, 269. Muſk-rat of Muſcovy has never been examined alive, or diſſected by any Naturaliſt, 270.

Muſmon, vi. 205. n.

Muſquaſk, v. 260. n.

Muſtache monkey deſcribed, viii. 163. Called *white-noſe* by the voyagers to Guiney, *ib.* Is the moſt beautiful of all the monkeys, 164.

Muſtela, iv. 232. n. 239. n. 245. n. 248. n. 252. n. 257. n. 262. n.; v. 254. n. 328. n.; vii. 210. n. 220. n. 274. n. 309. n. 321. n.; viii. 267. n.

Myrmecophaga, v. 333.

N

Nature: Firſt view of it, vi. 249.; may be conſidered as an immenſe living power, *ib.*; wants only the power of creating and annihilating to render her omnipotent, 250. View of the different bodies which conſtitute the ſyſtem of Nature, 252. Second view of Nature, vii. 89. Conſideration of the different ſpecies of animals by which the earth is inhabited, *ib.*

Negroes; account of different nations of them, iii. 140. *et ſeq.*

Niagara; Charlevoix's account of the famous cataract there, i. 280. Is not leſs than 140 or 150 feet high, 281.

Nil-gaux, vii. 42. n.

Northweſt, or Northeaſt paſſage to China; of its exiſtence, i. 144.
Nutrition and growth of animals; diſſertation on it, ii. 39.

O

Ocean kept in perpetual motion ſince the beginning of time, i. 7. 17. Its bottom as irregular as the ſurface of the dry land, 7. Mountains, currents, calms, &c. in different parts of the ocean, 8. Different kinds of plants and animals found in it, 9. Its waters muſt have remained for a great number of years on the earth, 11. Flux and reflux of the ocean are the cauſes of the horizontal poſition of the ſtrata of the earth, 18. Waters of the ocean have a conſtant motion from eaſt to weſt, 31, 32. May again cover the earth, 41. General account of the changes produced by its flux and reflux, 57. The ſaltneſs of the ocean proceeds from banks of ſalt in its bottom, and likewiſe from the ſalts brought down by rivers, 275. Its water exceſſively cold at great depths, *ib.* Is not more ſalt at the bottom than at the ſurface, 276. Sulphureous ſprings, beds of bitumen, &c. found at the bottom of the ſea, 276.
Ocelot, or Mexican cat, deſcribed, vii. 243. The moſt beautiful of all ſpotted animals, 245. Is exceſſively fond of blood, 246. Cannot be tamed, 247.
Odobenus, vii. 355. n.
Old age; a diſſertation upon it, ii. 470.
Olive cavy. See *Akouchi*.
Onager, vi. 264. n.
Opoſſum, v. 405. n.
Opoſſum of Virginia deſcribed, v. 404. Has a cavity under the belly, in which the young are received and ſuckled, *ib.* The ſame with the great oriental philander of Seba, 407. Remarks on his account of theſe animals, 411. The opoſſum is an original native of the warm countries of America, 422. Its time of geſtation probably much ſhorter than that of other quadrupeds, 423. Its pouch not to be regarded as indiſpenſably neceſſary for the preſervation of the young, 424. The young opoſſums never quit the teats with their mouths till they have ſtrength to walk, 425. Manner of the opoſſum's catching its prey, 427. Is eaſily tamed, but has a diſagreeable appearance

appearance and ſmell, 428. M. de la Borde's account of three tame opoſſums, 429. The opoſſum is not the ſame with the Eaſt India animal called *coeſcoes*, 430. Murine opoſſum deſcribed, 435. The birth of the young in this ſpecies ſtill more premature than in the former, 436. Mexican opoſſum deſcribed, 438. Have an ugly aſpect, 440.

Orang-outang deſcribed, viii. 77. The ſame with the pongo and jocko, *ib.* Have the greateſt reſemblance to man of all the apes, 78. Bontius's account of them, *ib.* This account ſuſpicious, 80. Dr. Tyſon's deſcription, *ib.* Accounts by other authors, 81. Buffon's account of one which he ſaw, 86. Of the natural inſtincts of theſe animals, diſtinguiſhed from what they acquire by education, 89. Compariſon of the body of the orang-outang with a human body, 95. Has a greater reſemblance to man than to baboons and monkies, 97. Tyſon's account of him criticiſed, 101.

Organic matter defined, ii. 36. How diſtinguiſhed from brute matter, *ib.* By means of organic matter Nature forms organized bodies, 37.

Ortohula, vii. 306. n.

Oſſa, v. 406. n.

Otter deſcribed, iv. 232. The young otters leſs handſome than the old ones, 233. Is of a ſavage diſpoſition, and cannot be tamed, 234. The ſpecies probably extend over all temperate climates, 235. Cayenne otters deſcribed, 236. Sea otters deſcribed, vii. 321. Canadian otter deſcribed, 324.

Ouanderou deſcribed, viii. 133.

Ouarine and alouate deſcribed, viii. 176. Exceed the largeſt monkies in ſize, and approach to that of the baboons, *ib.* Marcgrave's account of their oratory, 177. Remarkable inſtances of their ſagacity, 180.

Ouaikare, vii. 151. n.

Ovis, iii. 462. n. vii. 133. n.

Ouiſtiti, or ſtriated monkey, deſcribed, viii. 205. Might be multiplied in the ſouthern countries of Europe, 207.

Ounce deſcribed, v. 167. Taught by the Perſians and others to hunt, 179. 182.

Ox deſcribed, iii. 423. The word, in common acceptation, denotes black cattle in general, without regard to ſex, *ib.* n. The cow may be uſed in ploughing, 435. Of caſtrating black cattle, 436. The copulation or contact of oxen produces

warty tumours on cows, 437. This diſeaſe never appears in Britain, *ib.* n. Of the propagation of black cattle, 438. Of their bellowing, 442. Marks of a good ox, 453. Of rumination, 448. Of milk, 453. Of the uſe of ſalt in fattening oxen, 454. They ought to be prevented from licking themſelves, 455. Of the Siberian and Norway oxen, &c. 459.

P

Paca, or ſpotted cavy, deſcribed, v. 392. Is an animal peculiar to America, *ib.* Is with difficulty taken alive, 394. Account of a tame one, 395. Is a very cleanly animal, 396. Gnaws wood ſurpriſingly, 400. M. de la Borde's account of the animal, 402.

Pacaſſe, a ſpecies of buffalo in Congo, deſcribed, vii. 42.

Pacos. See *Lama*.

Pag, v. 392. n. 394. n.

Panther deſcribed, v. 167.

Papio, viii. 121. n.

Pardalis, vii. 243. n.

Paſan, vi. 407. n.

Patagonian giants; account of them, iii. 186.

Patas, or red monkey, deſcribed. viii. 144. Is leſs dexterous than the other monkies, but extremely inquiſitive, 145.

Pecari, v. 271. n.

Pekan and viſon deſcribed, vii. 307. The pekan ſtrongly reſembles the pine-weaſel, 308.

Perouaſca deſcribed, viii. 234.

Petit-gris, v. 321. n.

Phalanger, or Surinam opoſſum deſcribed, vii. 174.

Philander, v. 406. 436. 438. vii. 174.

Phoca, vii. 348. n.

Pholidotus, v. 355. n.

Pichou, vii. 249. n.

Pigmy deſcribed, viii. 106. Ariſtotle's remarks on pigmies, &c. *ib.* Pigmies were by the ancients accounted more mild and docile than other apes, 109.

Piloris, a ſpecies of wood-rats, deſcribed, v. 262. n.

Pinche, or red-tailed monkey, deſcribed, viii. 211. Is a beautiful animal, but extremely delicate, 212.
Pine-weaſel, or yellow-breaſted martin deſcribed, iv. 235. The female ſeizes the neſts of ſquirrels, ducks, and buzzards, 246.
Piſmire eater, v. 333. n.
Pithecus, viii. 206. n.
Planets, how formed, i. 58. Diſcoveries made concerning their revolutions by Galileo and Newton, 61. Difficulties attending the explanation of the planetary motions, 62. Their revolutions accounted for, from an impulſive and attractive force, 63. Probable cauſe of the impulſive force, *ib.* Orbits of the planets nearly circular, *ib.* Conjecture concerning the formation of planets by the falling of a comet into the ſun, 64. Have probably received their centrifugal forces all at one time, 66. All of them, together with their ſatellites, not equal to $\frac{1}{650}$th of the ſun, 67. Might be driven off in a liquid ſtate, all at once, by the ſtroke of a comet, 68. Their denſities decreaſe in proportion to their diſtance from the ſun, and why, *ib.*
Platyceros, iv. 113.
Polatouche, v. 307. n.
Polecat deſcribed, iv. 248. Might be uſefully employed in diminiſhing the number of rabbits, 249. Is confined to the temperate climates, 250.
Pongo. See *Orang-Outang*.
Porc-epic, vii. 69.
Porcellus, vii. 178. n.
Porcupine deſcribed, vii. 69. Cannot dart its quills to a diſtance, 71. Can exiſt and multiply in cold countries, 73. Braſilian porcupine deſcribed, 76. Canada porcupine deſcribed, 83. Is a ſleepy animal, 85.
Porcus, iv. 304. viii. 240.
Pouc deſcribed, viii. 233.
Preacher monkey deſcribed, viii. 176. n.
Proſimia, vii. 233. n.
Pteropus, v. 283.
Puberty; diſſertation on it, iii. 400. Marriage the natural ſtate of the human ſpecies after puberty, 422.
Putorius, iv. 248. n.

Q

Quato, viii. 184.
Quojas-marrou, viii. 77. n.

R

Rabbit deſcribed, iv. 155. Their ſurpriſing fecundity, 157. Have a great reſpect for their fathers, 161. Are fond of heat, 162.

Racoon deſcribed, v. 46. Dilutes in water every thing he intends to eat, 48. Account of a tame one, 49.

Rains occaſion great changes on the ſurface of the earth, i. 51. Diſſertation upon their effects, 473.

Rain-deer deſcribed, vi. 315. Is mentioned by Julius Cæſar, 320. 322. Was confounded with the elk by Pliny, 323. Is found in more northerly regions than the elk, 324—326. Great advantages derived by the Laplanders from theſe creatures, 330—333. Cannot bear the warmth of a ſouthern climate, *ib.* The rain-deer, for drawing ſledges, produced by a mixture of the wild and domeſtic kinds, *ib.* Manner of travelling in the ſledges, 334. Similarity between them and the ſtags, *ib.* The rain-deer defends himſelf againſt the wolf, 339. But is killed by the glutton, 340. Methods uſed by the Laplanders of hunting the wild rain-deer, 343.

Rangier, vi. 317. n.

Rat deſcribed, iv. 275. Several ſmall animals confounded under this name, 277. The whole ſpecies are natives of temperate climates, 279. Have never multiplied farther north than Sweden, 280. Brown rat deſcribed, 336. Approaches to the nature of the water-rat, 337. Madagaſcar rat deſcribed, viii. 284. Water-rat deſcribed, iv. 290. White water-rat deſcribed, viii. 239.

Rat de bois, v. 406. n.

Rat ſavage, *ib.*

Reproduction of animals; diſſertation on it, ii. 16.

Rhenos, vi. 317. n.

Rhinoceros deſcribed, vi. 92. Was unknown to the ancient Greeks, *ib.* n. Account of one brought to London from Bengal, 99. The horn of the rhinoceros eſteemed by the Indians, on account of its imaginary medical virtues, 105. The rhinoceros is an exceedingly brutal and untractable animal, ſubject to paroxyſms of rage, which nothing can appeaſe, 106. Does great damage to the cultivated fields, 108. Exceſſive hardneſs of his ſkin, 111. Has the ſenſes of hearing and ſmelling very acute, but bad eyes, 113. Account of one brought to France, 114. Is capable of being tamed, 115.

River-horſe, vi. 278. n.
River-pard, vi. 278. n.
River-hog, vii. 64. n.
Rivers generally run perpendicular to the ſea coaſts where they empty themſelves, i. 10. Follow the direction of the mountains from whence they derive their origin, 11. Some bury themſelves under ground, *ib.* Sometimes block up ſeas, and form new lands, 36. Produce great changes on the ſurface of the earth, 51. Have angles correſponding to each other on their oppoſite banks, *ib.* Diſſertation upon them, 251.
Rock cavy deſcribed, viii. 274. Partakes of the nature of the rabbit and rat, *ib.*
Roe-deer deſcribed, iv. 120. His method of eſcaping from hounds, 121. Their horns, while ſoft, are extremely ſenſible, 127. M. de la Borde's account of the American roe-deer, 135.
Roſmarus, vii. 355. n.
Roſomaka, vii. 274. n.
Rougette, v. 282. n.
Rupicapra, v. 206. 363.

S

Sable deſcribed, vii. 309. Mr. Gmelin the firſt who gave a figure of the animal, *ib.* Manner of hunting them, 313—315. This animal is probably the ſame with the *ſatherius* of Ariſtotle, 313.
Sable mice, vii. 316. n.
Saccawinkee, viii. 201. n.
Sagouy, viii. 205. n.
Sai, or weeper, deſcribed, viii. 196. Called alſo *muſk monkeys*, *ib.* Are mild, docile, and very timid animals, 197.
Saimiri, or orange monkey, deſcribed, viii. 199. Is a very beautiful animal, but very delicate, *ib.*
Sajou, or capuchin monkey, deſcribed, viii. 193. Their conſtitution well adapted to temperate climates, 194.
Saki, or fox-tailed monkey, deſcribed, viii. 201.
Sapajous and ſagoins, deſcribed, viii. 172. Five different ſpecies of ſapajous, 173. Six ſpecies of ſagoins, 174.
Saricovienne, vii. 32. n.
Sarigoy, v. 405. n.
Satyri ſylveſtres, viii. 77. n.

Satyrus Indicus, *ib.*
Sayga, or Scythian antilope, deſcribed, vi. 393.
Schiſmus, iv. 239. n.
Schwein, iii. 500. n.
Sciurus, iv. 268. n. 325. n.; v. 307. n. 312. n. 321. n. 328. n.
Sea communicates with certain lakes, i. 11. Gains on ſome places of the earth, and loſes on others, 31. Its bottom perpetually filling up, 33. Diſſertation upon ſeas, 290. Upon the inequalities in the bottom of the ſea, 351.
Sea-ox, vi. 278. n.
Sea-lion. See *Seal.*
Seals deſcribed, vii. 330. Is the model from whence the poets formed the Tritons, Sirens, &c. 331. Colour of the ſeal's hair becomes white with age, 338. n. Account of a very big one ſhown at London, 341. n. Three diſtinct ſpecies of this animal, 342. The ſeal ſeems to be entertained with thunder and lightning, and is fond of receiving rain, 345. Is very tenacious of life, *ib.* The ſea-lion perhaps a ſpecies of ſeal, 347. That animal deſcribed, 348.
Seeing; diſſertation on that ſenſe, iii. 1.
Senſes in general; diſſertation upon them, 40.
Serval, or mountain cat, deſcribed, vii. 240. Is an exceedingly ferocious animal, 241.
Seruoi, v. 405. n.
Sheep deſcribed, iii. 462. The ſpecies could not have ſubſiſted without the aſſiſtance of man, 463. Is the moſt ſtupid of all quadrupeds, 465. Theſe two poſitions controverted, 463—465. n. Some other aſſertions controverted, 468. n. Worms frequently found in their livers, 478. Account of the ſheep of different countries, 482—485.
Shrew-mouſe deſcribed, iv. 305. Seems to fill the interval between the rat and the mole, *ib.* A diſeaſe of horſes falſely attributed to the bite of this animal, 306. Braſilian ſhrew deſcribed, viii. 273.
Siegen-boek, iii. 469. n.
Simi-vulpa, v. 406. n.
Simia, vii. 223. 231. n. viii. 77. n. 106. n. 117. n. 121. n. 129. n. 137. n. 140. n. 154. n. 160. n. 163. n. 176. n. 184. n. 194. n. 198. n. 201. n. 203. n. 205. n. 209. n. 211. n.
Singe, viii. 106. n.
Siyah-guſh, v. 221. n.

Skunk, vii. 297. n.
Sloths deſcribed, vii. 151. Conſtitute the laſt term of exiſtence in the order of animals endowed with fleſh and blood, 155. Their miſerable ſituation, 156. Are very tenacious of life, 158. Are peculiar to South America, 160. Account of a tame one, 161. M. de la Borde's account of the ſloths in Cayenne, 163.
Sorax, iv. 305. n.
Souſlik, or Caſan marmot, deſcribed, viii. 234. Is extremely fond of ſalt, 236.
Spider monkey, viii. 184.
Squaſhe, vii. 296. n.
Squirrel deſcribed, iv. 268. Approaches to the nature of birds, 269. Sails over rivers on a piece of the bark of a tree, *ib.* Few varieties of the ſpecies, 271. Squirrels are natives of cold rather than warm climates, 272. Fat ſquirrel deſcribed, 325. Sleeps during the winter, 327. The fat ſquirrels do not inhabit very cold countries, 331. Garden ſquirrel deſcribed, 332. Flying ſquirrel deſcribed, v. 307. Manner of its flying deſcribed, 309. Reſembles the bat, 311. Sailing, or great flying ſquirrel deſcribed, 312. Account of a tame one, 316. Gray ſquirrel, 321. Palm ſquirrel, Barbary ſquirrel, and ground ſquirrel, 328. Coquallin, or varied ſquirrel, vii. 176.
Stag, or red deer, deſcribed, iv. 74. Of the knowledge neceſſary for a huntſman, 77.
Stein-boek, vi. 363. n.
Strata of the earth; why always in a horizontal poſition, i. 15. 18. 28. Thoſe of ſtones in quarries almoſt all horizontal, or regularly inclined, 25. Preſerve the ſame thickneſs throughout their whole extent, 26. Beds of ſand and gravel are an exception to the general rule concerning the formation of ſtrata, 26. Thoſe formed by rivers, how diſtinguiſhed from the original ſtrata of the earth, 27. No river-ſhells found in the original ſtrata, 28. Diſſertation on the formation of ſtrata, 157.
Strepſiceros, vii. 8. n.
Surikate, or four-toed weaſel, deſcribed, vii. 167. Cannot ſubſiſt long in a cold climate, 168.
Surmulot, iv. 336. n.
Sus, iii. 500. n. v. 272. vii. 59. 64. viii. 240. 242.

T

Tajacu, v. 272. n.
Tajovanicus, v. 355.
Talapoin monkey deſcribed, viii. 165.
Talpa, iv. 309. n. viii. 239. n.
Tamandua, v. 333. n.
Tamanoir, v. 333. n.
Tamarin, or great-eared monkey, deſcribed, viii. 203.
Tanrec and tendrac, or Aſiatic hedge-hog, deſcribed, vii. 86. Sleep in the winter, during which time their hair falls off, 88.
Tapeti, or Braſilian hare, deſcribed, viii. 276.
Tapir deſcribed, vi. 243. The largeſt animal of America, *ib.* Suppoſed by ſome naturaliſts to belong to the hippopotamus, 247. Is a mild and timid animal, 248.
Tarandus, vi. 317. n.
Tardigradus, vii. 151. n.
Tarſier, or woolly jerboa, deſcribed, vii. 171. Is remarkable for the length of its hind legs, *ib.*
Tatu, v. 369. n.
Tatus, v. 369. n.
Taxus, iv. 226. n. v. 226. n.
Tayra, galera, or Guiney weaſel, deſcribed, viii. 265. Is a ſmall ſpecies of martin, or polecat, 266.
Tepe Maxtlaton, vii. 249. n.
Tides; diſſertation on their cauſes and effects, i. 339.
Tiger deſcribed, v. 153. Holds the ſecond rank among carnivorous animals, *ib.* Is ſaid to follow the rhinoceros for the ſake of eating his dung, 155. His prodigious ſtrength, 156. His exceſſive ferocity, 159. Account of a combat between a tiger and two elephants, 160. The ſpecies more rare than the lions, 164. The ſkin much eſteemed in China, 165.
Tiger cat, vii. 241.
Tigers; diſſertation on them, v. 87.
Tigris, v. 153. 188. 199.
Tlacootzlotl, vii. 243.
Tolai, or Baikal hare, vii. 228. Reſembles the rabbit, *ib.*
Tragelaphus, v. 205.
Tragulus, vii. 14. n. 22. n. 27. n. 33. n. 45. n.
Tragus, vi. 412. n. vii. 45. n. 110. n.
Trichecus, vii. 355. n. 375. n.

Tucan, or Mexican ſhrew, deſcribed, viii. 271. The ſame with the red mole of Seba, *ib.* Has not ſagacity ſufficient to diſcover its retreat, after having once left it, 272.

V

Vacca, viii. 225. n.
Vache, vii. 2. n.
Vampire, or ſpectre, deſcribed, v. 281.
Vanſire deſcribed, vii. 221. Is not a ferret, as ſome have thought, *ib.* The ſame with the Java weaſel of Seba, *ib.* Reſembles an animal called the *nems*, 223. Deſcription of that animal, *ib.*
Vari, vii. 223. n.
Veſpertilio, iv. 381. n. v. 281. n. vii. 234. n.
Veſuvius; account of its firſt eruption, i. 412.
Viper; has been ſaid to ſuck cows, goats, and ſheep, iii. 497. n.
Virginity; its ſigns equivocal, ii. 417.
Viſon deſcribed, vi. 307. Has a great reſemblance to the martin, 308.
Viverra, iv. 252. n. v. 53. n. 240. n. 254. n. vii. 210. n.
Unau. See *Sloths.*
Volcano's may be the cauſe of conſiderable earthquakes, i. 47. Diſſertation on them, 408.
Urſus, iv. 226. n. 313. n. vi. 46. n. 53. n.
Urus, vi. 151. n. Is the ſame animal with the common bull in its wild ſtate, 171.
Vulpes, iv. 214. n. v. 46. n. 53. n. 406. n. vii. 268. n.

W

Walrus deſcribed, vii. 354. Is ſeldom ſeen but in the northern ſeas, 357. Formerly much more diffuſed than at preſent, 365. Can live for ſome time in a temperate climate, 367. Indian walrus or dugon deſcribed, 370.
Water; ſubterraneous collections of it exiſt, eſpecially under large plains, i. 54.
Water elephant, vi. 278.
Water ſhrew, or blind mouſe, deſcribed, iv. 308.
Water ſpouts; account of them and their cauſes, i. 398.
Weaſel deſcribed, iv. 257. Rarely found in the northern countries, *ib.* Cannot be tamed, 258. This aſſertion contradicted, 260.
Whirlwinds; account of them, i. 394. Produced by contrary winds, 395.

Whirlpools accounted for, i. 396.
Whiſton's theory of the earth, i. 97. See *Earth.*
Widdor Schaaf, iii. 462. n.
Wieprz leſny, iii. 500. n.
Wild animals. See *Animals.*
Wild boar. See *Hog.*
Winds: of regular ones, i. 367. Of irregular ones, 386.
Wolf deſcribed, iv. 196. Has a very ſtrong carnivorous appetite, *ib.* Frequently dies of hunger, *ib.* Has a great reſemblance to the dog, 197. May be tamed whilſt young, 198. Is a ſolitary animal, 199. Differences between the wolf and dog, 201. Great ſtrength of the wolf, 204. Method of hunting this animal, 205. Ferocity of the wolf comes on about the age of eighteen months, 208. Miſtake of the author concerning the exiſtence of wolves in Scotland, 210. n. Black wolf deſcribed, 212. Mexican wolf deſcribed, viii. 258.
Woodward's theory of the earth, i. 113.

X

Xoloizcuintli, viii. 258. n.

Y

Yſquipatl, vii. 296. n.
Yſard, vi. 364. n.
Yſarus, vi. 364. n.
Ytzcuinte porzotli, viii. 262. n.

Z

Zebra deſcribed, vi. 264. Is perhaps the moſt elegant of all quadrupeds, *ib.* Is neither a horſe nor an aſs, 265. Is not the *onager* of the ancients, 266. Approaches to the nature of the aſs and the horſe, 272, 273. Of the ſame ſpecies with the fertile mule of Tartary called *ezigithai*, 274.
Zebu, or dwarf ox, deſcribed, vi. 150. 240.
Zibet. See *Civit.*
Zemni, or Podolian marmot, deſcribed, viii. 232.
Ziſel, or earleſs marmot, deſcribed, viii. 229. Is very different from the hamſter, 231.
Zits jan, viii. 232. n.
Zobel, vii. 309. n.
Zobela, vii. 309. n.

FINIS.

MVSEVM BRITANNICVM